THE

# VETERINARY JOURNAL

FEBRUARY 1902.

## Royal College of Veterinary Surgeons.

THE Quarterly Meeting of the Council of the College was held on the 10th inst., the President, Mr. A. Lawson, occupying the chair.

The following members signed the attendance book:—Colonel Lambert, Professors M'I. M'Call, M'Fadyean, Shave, and W. O. Williams, Messrs. Abson, Bower, Byrne, Dollar, Hartley, Locke, Mason, M'Kinna, Mulvey, Shipley, Trigger, Villar, Wartnaby, and Wragg; Mr. Thatcher (Solicitor), and Mr. Hill (Secretary).

The minutes of the previous meeting were confirmed.

A letter was read from Professor Dewar expressing his inability to be present, and asking some one to formally read the notice of motion he had suspended in the Council Room, at the close of the meeting. He also called the attention of the Council to the synopsis of several subjects of examination in the Schedule of the Register which very much required revision. Hygiene and dietetics he thought could easily be better arranged and made much more explicit. Zoology was much out of date, and there were others which no doubt could easily be improved. He had intended to ask the Council to remit the matter to the Examination Committee to consider and report.

Mr. JAMES M'KENNY wrote thanking the Council for conferring on him the honour of Secretaryship of the Board of Examiners for Ireland. Mr. J. Malcolm also wrote resigning his Examinership owing to his not being able to spare the time required for the work. In his letter he expressed his appreciation of the consideration and courtesy of the Council and its officials during his tenure of the office. A telegram was also received from Mr. Bloye tendering his resignation of the Examinership in Anatomy, Class A.

On the motion of Mr. TRIGGER, seconded by Colonel Lambert, the resignations were accepted with regret.

A letter was received from Mr. Banham, addressed—"To the President and Council of the R.C.V.S., from G. A. Banham, with a request that Mr. A. W. Hill opens and reads this to the President and Council at their meeting on January 10th, 1902, and that it is not opened and read by anybody before the President and Council have heard it read to themselves.

Mr. MULVEY asked whether that did not mean that the Secretary, President, or some other officer of the College had seriously neglected his duty?

Mr. LOCKE thought that it was rather insulting to the Council.

Professor W. O. WILLIAMS said it appeared to be the intention of Mr. Banham to indicate a vote of want of confidence in the Secretary.

Mr. MASON.—And also in the President.

On the motion of Mr. LOCKE, seconded by Mr. Byrne, the Secretary was instructed to return the letter to the sender with an intimation that such an expression as was on the envelope was an indignity to the Council, and any communication must be addressed to the Secretary or the President in the usual way.

A letter was read from Mr. George Robinson, of Chesterfield, dated January 1st, in which he stated that Mr. Somerset and himself had attended the Derby Quarter Sessions, and had been paid 3s. 6d. for time and 4s. for train, on the ground that they were not professional men according to Act of Parliament. He desired to know what they were really entitled to.

A letter having a certain bearing on the matter was read from the Home Secretary, dated October 18th, which stated that after consultation with the Commissioner of Police for the Metropolis and the Chief Magistrate of the Metropolitan Police Courts, the Home Secretary had framed a scale of fees to be allowed to veterinary surgeons for their services in examining animals at the request of the Metropolitan Police, and giving evidence in the Courts in regard thereto. The letter stated that before issuing the scale the Home Secretary would be prepared to consider any observations on the subject which the Council might wish to submit to him. From the scale of fees enclosed, it appeared that for the examination of an animal (including attendance to give evidence on the same day) a fee of 10s. 6d. was to be paid, and also a fee of 10s. 6d. for attending to give evidence on a day other than that on which the examination was made. If two animals were separately examined at the same time, and evidence was given in respect to each of them on separate charges, the fee in the second case would be at the rate of 7s. 6d., and for each case after the second, 5s.

Mr. WRAGG moved the reference of the letter to a Committee to report to the Council at the next meeting.

Mr. MULVEY seconded the motion, pointing out that it was the second time the fees had been revised. In the year 1892 a letter was addressed to him as President of the College, and he asked the Home Secretary that the fee might be one guinea, which was allowed. Some two or three years later the Council was asked to accept a lower fee, and the then President accepted it, and the fee was reduced to 10s. 6d. Now it was to be reduced again. It looked as if veterinary surgeons in the Metropolis would take anything they could get, but he should not be inclined to do so.

Mr. VILLAR said that having regard to the very long time which had elapsed since the communication was made to the Council, he ventured to think it was taking somewhat a liberty to delay the matter a further three months, as well as being a loss of valuable time. He therefore proposed as an amendment that the letter should be considered and dealt with at once, and then went on to propose "That the Council of the R.C.V.S. having considered the letter from the Home Office, regret to see that the fees are altogether inadequate." He thought a short reply such as that would show the gentlemen in authority that the Council were not to be trifled with, and would also leave them to take the next step. With regard to Mr. Robinson's letter he suggested that the Secretary should be

instructed to write to the Clerk of the Justices, pointing out that the veterinary profession was a profession according to law by Royal Charter, and enclosing copy of the charter for the use of the Clerk and for the benefit of his Justices.

Mr. WRAGG said he was not aware when he rose that the letter had been received so long ago, and with the permission of his seconder withdrew his motion in favour of Mr. Villar's.

Mr. ABSON seconded Mr. Villar's motion, which was agreed to, as was also the suggestion with regard to Mr. Robinson's case.

Mr. MULVEY thought an addition might be made to the instructions given to the Secretary. There were deciding cases on the point which the Secretary might send, and the Solicitor might also associate with the Secretary in replying.

The suggestions were adopted.

A letter was read from the Agent-General for Victoria, Australia, transmitting a copy of a joint letter received from Veterinary Captains E. A. Kendall and H. S. Huddock, who were anxious to obtain details of the requirements of the Council to enable them to obtain recognition in this country as colonial practitioners.

Professor W. O. WILLIAMS.—May I ask if the committee appointed some years ago to investigate the claims of the colonial schools have ever been brought together. I was elected a member of that committee, and have never been asked to attend it. I simply wish to draw attention to the fact that the colonial schools have time after time applied for admission, and the Victorian school has taken great trouble to be recognised, and I think in justice to the colonies this thing ought to be gone into thoroughly.

Mr. MULVEY.—For the information of Professor Williams I may say that not only was a committee appointed, but they held several meetings. They wrote to the Secretary of the various colonial schools and obtained from them their syllabuses. The syllabuses were considered at subsequent meetings, and not one of them was found to come up to the standard as laid down by this College, and for that reason it was found impossible to recognise them. But all the applicants were written to, and told that as soon as their curriculum approached that of this College, then this College would be prepared to recognise them.

Mr. VILLAR.—Were they students or members practising in the colonies who were told this, or was such a communication made to the Principals of the various schools in the colonies or to the Agent-General?

Mr. MULVEY.—To the Principals of the various schools at home and abroad.

Mr. VILLAR.—The communication we have now is from the Agent-General for Victoria, the representative of the Government of Victoria in this country, and I think it would be only polite on our part if we were to reply to him in similar terms to those Mr. Mulvey has already indicated as being sent to the Principals of the schools.

Professor W. O. WILLIAMS.—I think the committee Mr. Mulvey refers to was appointed many years ago, but if my memory serves me rightly there was another committee appointed later, of which I was a member, and I have never been called to attend any such committee. The schools in the colonies have altered their curriculum very much indeed since the committee Mr. Mulvey refers to sat.

Mr. MULVEY.—The only committee of which I have any knowledge is

one that held its meetings some four or five years ago; Professor M'Fadyean was a member of the committee.

The PRESIDENT.—If there has been any committee held within recent years Mr. Hill will give you the particular dates.

Professor WILLIAMS.—I will take the trouble to look into the matter myself.

Mr. VILLAR.—We have it on the authority of Professor Williams, who is an authority on all points of veterinary education, that the Victoria Colleges curriculum has been altered extensively in the last three or four years. May I ask that the Secretary be asked to obtain a copy of the new curriculum?

Mr. THATCHER, Solicitor.—That has been done quite within the last two years. The matter was placed in my hands, and I had some correspondence abroad. A fresh curriculum was submitted, which I brought before a sub-committee, pointing out where I considered that the curriculum did not meet the requirements of the College. They altered their curriculum very considerably, but still it did not reach our standard. The application of the Privy Council was from an Indian school, and in that case also it was decided that the curriculum was not up to the standard.

Mr. ABSON.—I think we may say that as soon as their syllabus reaches the standard of our own we can do something in the matter.

Professor M'FADYEAN.—I hope the Council will not, without due deliberation, assent to the view of the question to which Mr. Abson has just given expression. I take it that this Council will insist upon all the guarantees that are required in the case of students educated at British Colleges, and that those examinations will have to be conducted in the same way—that there will have to be four of them. I do not think it at all follows that because the Colonial Colleges have a four years' curriculum we are going to grant them the diploma of Membership of this College on terms that are in any way different from the ordinary.

Mr. ABSON.—Professor M'Fadyean is under some misapprehension as to my meaning. I meant that should we get a notice that their syllabus is equal to our own, then we may take the question into consideration.

Mr. DOLLAR.—Before this question is disposed of I should just like to add one or two words. On several occasions I have had correspondence with Mr. Kendall, from whom, I believe, the present letter has come. The desire in Australia is not in any way to evade any of the obligations which we place on students who present themselves for our examination. Mr. Kendall has told me that the Australian Colleges are prepared to accept any curriculum which we consider necessary, and to prepare their students in a way which will be approved by us. The only point on which they desire enlightenment is exactly what guarantees we shall exact in order to accord to their students the privilege of being registered on our list. They are quite willing to make their course and their examinations as extended and stringent as ours are at the present moment, but they are in a condition of more or less ignorance as to what view we shall take of the subject. If we will clearly give them to understand what we want they will make every effort to comply. It is very easy for any person resident in England to know exactly what the subjects are, and the manner of carrying out the examinations by any of the bodies which are mentioned in the Schedule, but the Australian Colleges really wish to know what our examination is, so that they may be in a position to conform to it.

The discussion then dropped, the Secretary being instructed to reply to the letter in the usual way.

A letter was received from the Agent-General of Natal enclosing a report of a Committee appointed by the Natal Government to consider the claim of Mr. H. Watkins-Pritchard, R.C.V.S., to have been the discoverer of the application of the serum treatment for rinderpest.

The Council at this point suspended its ordinary business in order to take part in an interesting little ceremony. Mr. Hunting. F.R.C.V.S., was called into the Council Room and presented with the Steel-Memorial Medal by the President. In making the presentation, the President said: "Mr. Hunting—I have been deputed by this Council to present to you the Steel Memorial Medal for distinguished services, and by a curious coincidence it appears to me that I have known you as long as any man sitting round this Board. I remember some two years ago your being of assistance to a celebrated firm in Manchester, and I had then the opportunity of seeing a great deal of you and of appreciating your capabilities. The great promises you gave I think have been amply fulfilled—(Cheers). I notice that you became a member of the profession in 1865 and Fellow in 1877. You have been a distinguished member of this Council, and you were President in 1894. You are the author of many works, and the editor of the *Veterinary Record*. I remember also that you were a professor of the Albert Veterinary College with Professor Gamgee, and that you held a similar position at the Chichester College. You have been an active member of the National Association and of other kindred associations. Within the last few years you were appointed an examiner both for the Membership and for the Fellowship degree. I may say that within the last month I have had the pleasure of going to Scotland and of hearing you examine, and I was very pleased indeed with the way in which you conducted the examinations. I think it is a matter for credit to the Council that they selected you as an examiner.—(Cheers.) I believe I am expressing the feeling of this Council when I say that they wish you continuous prosperity and good health to enjoy it."—(Cheers.)

Mr. W. HUNTING in reply said—"I thank you, Mr. President, for the very kind and flattering remarks you have made in presenting me with this medal. I thank you, gentlemen of the Council, for having selected me as worthy of this medal. I can assure you that if I live long enough I shall not consider this the ultimate payment of my work, but I shall continue to do whatsoever I can in the future."—(Cheers.)

Mr. HUNTING then left the Council Room.

The SECRETARY having read the obituary list and announced the donations to the Library, the reports of the various Committees were taken into consideration.

The first report was that of the Registration Committee, which recommended a certificate being given to a member whose diploma had been accidentally destroyed, and detailed the work of the Committee since the last Council Meeting. With regard to the unqualified person who had obtained a warrant as equine dentist to the King's horses, the report stated that the warrant had been cancelled on the application of the holder.

The report was adopted.

The Committee appointed to consider the question of returned voting papers also presented a short report of no public interest, which was adopted.

The report of the Finance Committee recommended a salary of £10 : 10s. to be paid to the Secretary of the Board of Examiners in Ireland, and also recommended certain steps being taken in consideration of the decreased number of students that came up for examination in Scotland. The quarterly statement of the Treasurer showed a balance of £263 : 10s., and the Committee recommended that the present liabilities should be discharged.

Mr. TRIGGER in moving the reception of the report drew attention to the fact that the recent examinations in London showed a profit of £97 : 10 : 7, but there was a loss on the Scotch Examinations of £103 : 12 : 7, and on the Irish Examinations of £8 : 11 : 10, leaving a total loss on the Christmas Examinations of £14 : 17 : 10.

Mr. MULVEY seconded the motion, which was agreed to, and on the motion of Mr. Trigger, seconded by Mr. Locke, the report was adopted, and the Finance Committee was instructed to consider the question of the expenses of the Scotch Examinations and report to the next Council Meeting.

The report of the Examination Committee stated that owing to complaints having been addressed to the Council as to questions being occasionally asked outside the syllabus, the Secretary had been instructed to request the Examiners to confine themselves strictly to the subjects laid down in the syllabus, a copy of which was to be sent to each Examiner.

The report was adopted.

The reports of the Courts of Examiners were referred to the Examination Committee.

A motion stood on the agenda paper in the name of Professor Williams, asking that the regulations of the India Office respecting the Indian Civil Veterinary Department should be discussed. At Professor Williams' request the notice of motion was withdrawn, Professor Williams considering that too much time had elapsed to make the discussion of the subject very profitable.

Mr. MULVEY, without binding himself to approval or otherwise, in accordance with Professor Dewar's letter, gave notice of the Professor's intention to move at the next meeting—"That notwithstanding anything contained in the preceding bye-laws, a certificate of having attended the course in botany, zoology, chemistry, and physiology prescribed for students of medicine in any of the Universities of the United Kingdom, shall qualify the holder to be examined in the subjects to which the certificate applies for the Diploma of the R.C.V.S. *Note.*—The foregoing motion if adopted by the Council to be inserted as a note at the foot of Examination A, Bye-law 72."

It was agreed that the Fellowship Examination should be held in London on the 10th May, the Saturday before the Scotch Examinations commenced, an amendment by Professor M'I. M'Call that the Examination should be held in Scotland being defeated.

The Quarterly Meeting of Council then concluded.

A Special Meeting of the Council was held immediately following the Quarterly Meeting, for the purpose of considering an alteration of bye-law proposed by Mr. DOLLAR, who moved—"That should any member of the Royal College of Veterinary Surgeons, who has been accused of conduct disgraceful in a professional respect, inform the Secretary within ten days

of the trial of his desire to be tried publicly, facility shall be given for admission of the members of the profession to the trial, and the indepen dent reporting of the evidence." Such a matter of justice would, he thought, scarcely meet with much opposition from the Council. The Registration Committee at the present time stood in a unique position as regards the trial of offenders, and he believed there was not a similar tribunal within the whole realm of the British Empire. The Incorporated Law Society was the society which most closely resembled the Council of the veterinary profession, but there was a very important and essential difference between the Incorporated Law Society, which investigated cases, and the Registration Committee. There was also a very important difference between the judges who finally decided the cases and the Council which decided the cases of the Royal College of Veterinary Surgeons. The difference was, that members of the Law Society were entirely distinct from and disconnected from the judges who gave the final verdict, whereas in the veterinary profession the members of the Registration Committee constituted by far the largest proportion of the Council. In fact it might be said without great exaggeration that the Registration Committee and the Council were the same. In the case of the Law Society, therefore, the defendant had the greater security of being tried by two independent tribunals, and he also had the much greater opportunity of bringing forward such facts as he desired to produce. In the case of the medical profession, which was generally considered to be most nearly akin to the veterinary profession, the trials were absolutely open, and were conducted with all the formalities observed in any ordinary British Civil Court. In order that any member not quite conversant with the method might have an opportunity of making himself acquainted with it, he had brought with him the *British Medical Journal* for December 7th, 1901, which contained a report of the case of the Liverpool Victoria Legal Friendly Society and the National Medical Aid Company.

Mr. MULVEY thought Mr. Dollar need not read that report. The members were well aware of the course of procedure at the Medical Council.

Mr. DOLLAR said if that was allowed he need not further trouble the Council. An objection made on the previous occasion was that it was unfair to the defendant to publish the fact that he had been convicted, and it was said by one member to be punishing a second time. It was scarcely necessary to point out that if a member had been guilty of conduct so heinous that it was considered advisable to strike him off the roll, it was equally desirable to notify all members of the profession of that fact, otherwise the punishment was no punishment at all. If a man was struck off the roll he forfeited his right, and was no longer a member of the profession. Having inflicted that punishment on him, the Council should not refrain from publishing the fact, and should not allow the member to go on practising the profession under the suggestion that it would be punishing a second time. Therefore publication, he thought, was very necessary. The gist of the proposition was really that the Council, by supporting this byelaw, affirmed in the clearest and most unmistakeable language that its trials were fair—(Oh! oh!),—that it had nothing to conceal, that it had no desire for concealment, and that if it had refrained from giving this facility before it had been only because there was a belief, which he thought he had shown to be scarcely well founded, that to do so was to inflict an extra

punishment. It was not an extra punishment. Every one would, he thought, agree that if an accused person desired to be tried in public, facilities should be given to him.

Mr. MULVEY seconded the proposition, but differed very materially from Mr. Dollar in the way he had brought forward the motion. Mr. Dollar had left it to be assumed that at some time or other the Registration Committee had refused to admit any one to the trial who chose to apply for admission. That was not the case. In every case in which a member, or even a farrier who had been called up to remove the term veterinary farrier from his board, had made application that he should be accompanied by an adviser or any one else he chose to bring with him, it had always been granted.—(Hear, hear.) There was really no earthly use for the motion, because it had been carried out by the Registration Committee from the time of its first appointment.—(Hear, hear.) But if it was thought to be better that such should appear as a bye-law, he had not the slightest objection, and was only too pleased that it should be so.

Mr. VILLAR said that although he had not the honour to be a member of the Registration Committee it was his intention to support the mover and seconder of the proposition. Mr. Dollar had remarked that the Registration Committee occupied a unique position. He (Mr. Villar) was afraid to a certain extent that was true. In the course of his profession it fell to his lot to travel all over the country, and he frequently met members of the profession, and there always seemed a complaint about the Registration Committee. At a public meeting held in that room the previous evening he had to assure the meeting—not that the Registration Committee needed any defence—that the members of the Committee always did their very best to try all cases which were brought before them in a perfeetly open manner and on a broad basis. It occurred to him that if this became a bye-law it would make it perfectly clear to the whole of the members of the profession that the Registration Committee had no fear, and was prepared to try all cases in open daylight. This proved what he felt sure really needed no proving, that all the actions of the Committee had been perfectly honourable from first to last.

Mr. TRIGGER thought no member of the Registration Committee would raise objection to the motion. He certainly would not. It was practically putting on the bye-laws what was already practised, as Mr. Mulvey had pointed out.

The resolution was unanimously agreed to.

### NOTICE OF MOTION.

Professor W. O. WILLIAMS gave notice that at the next meeting of the Council he purposed proposing Mr. Duncan Hutcheon, M.R.C.V.S., Principal Veterinary Adviser to the Government of the Cape of Good Hope, for election as an Honorary Associate of the Royal College of Veterinary Surgeons, as a mark of recognition of the valuable work Mr. Hutcheon had done in and for the South African Colonies.

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XUM

# Royal College of Veterinary Surgeons.

## EXAMINATIONS IN SCOTLAND AND IRELAND.

At meetings of the Board of Examiners held in Edinburgh, Glasgow, and Dublin on December 13th for the written examination, and in Edinburgh and Glasgow on and between December 18th and 20th for the orals, the following gentlemen passed their final examination, and were admitted members of the Royal College of Veterinary Surgeons :—

*New College.*—Messrs. J. Bradley, F. Dunning,* R. Finch, J. Latta, F. Moon, C. Pitt, R. Scott.
*Dick College.*—Messrs. K. Barker, J. P. O'Reilly, N. S. Stevens.
*Glasgow College.*—Messrs. T. Kilpatrick, J. Allan, J. M'Intyre,‡ D. Frew.‡

The following passed their Third or "C" Examination :—

*New College.*—Messrs. W. D. Lindsay, L. W. Lloyd,* A. Macfarlane, G. H. Nicholson, J. A. Shaw, F. Sugden, A. A. Walker, T. Walker.
*Dick College.*—Messrs. J. Cooper, R. N. Lewis,* R. P. Johns.
*Glasgow College.*—Messrs. J. S. Woodrow, J. Crookes, J. Wallace.

The following passed their Second or "B" Examination :—

*New College.*—Messrs. A. Barr, S. Robson, P. Reilly, R. Elliott.* ‡
*Dick College.*—Messrs. A. J. Horner, A. B. Howe,* J. Henderson, W. W. Kerr.
*Glasgow College.*—Messrs. K. M'Kenzie,* J. Spreull, F. M'Shane.
*Dublin College.*—Messrs. W. B. Devine,† and E. J. O'Riordan.

The following passed their first or "A" Examination :—

*New College*—Messrs. C. Elphick, G. H. Petch, T. B. Schofield,* H. Wheatley.
*Dick College.*—Messrs. H. Brassey, C. V. Gerard, H. W. Jevers, E. H. Leyland,* B. Rickerby, F. S. Warburton.*
*Glasgow College.*—Messrs. J. Hill and W. D. Blair.
*Dublin College.*—Messrs. G. Barry and M. P. Walsh.

Marked thus * passed with Second class Honours.
" " † " First " "
" " ‡ under 3 years' course.

R. Rutherford, F.R.C.V.S.,
Sec. Board of Examiners.

*Edinburgh, December 30th*, 1901.

## COLONIAL VETERINARY EDUCATION.

### THE VETERINARY BOARD OF VICTORIA.

EXAMINATION, NOVEMBER 1901.

*1st Year Students.*

Written Examination in ELEMENTARY PHYSICS.

Time allowed for this Paper two (2) hours.

*Examiner*—Mr. A. W. CRAIG, M.A.

1. What is heat?
   Give an account of some of the more important sources of heat, and of the effect of heat upon bodies; for example, on platinum, ice, and sugar respectively.
2. State the law which governs the relation between the volume occupied by a gas and the pressure upon it.
   If a gas contained in a vessel standing over water occupies a volume of 1 cubic foot at the ordinary pressure of the atmosphere, what will be its volume when the pressure is (*a*) reduced to one-third of the atmosphere; (*b*) increased to three atmospheres?
3. How would you empty a vessel of liquid by means of a siphon? Give the explanation of the process as fully as you can.
4. A narrow glass tube, say 1 yard long, is completely filled with mercury, closed with the thumb, and inverted in a vessel containing mercury. Explain fully what will take place, and state how the experiment will be affected by elevation above the sea level.
5. Describe the method you would employ in finding the specific gravity of turpentine and of cork.

*1st Year Students.*

Written Examination in ELEMENTARY ANATOMY.

Time allowed for this Paper two (2) hours.

*Examiner*—Mr. D. J. M'C. KERR, G.M.V.C.

1. Describe fully the development of bone in long and flat bones.
2. Describe the following joints, giving examples of each, viz.:—Enarthrosis, ginglymus, synchondrosis, and gomphosis.
3. Write a comparative description of the scapula and femur of the horse and ox.
4. Name the bones and ligaments entering into the formation of the stifle and elbow joints of the horse.
5. Name the bones and ligaments entering into the formation of the hip and hock joints of the ox.
6. Name the bones entering into the formation of the pelvis of the horse, and compare it (the pelvis) with that of the ox.

*Note.*—Five questions only to be answered. No. 1 must be included in the five.

*1st Year Students.*

Written Examination in BIOLOGY (ELEMENTARY ZOOLOGY and BOTANY).

Time allowed for this Paper two (2) hours.

*Examiner*—Mr. D. M'ALPINE (Government Vegetable Pathologist).

*Section I.—Zoology.*

1. What are the characteristics of the class vermes or worms, and give a few examples.
2. Describe a useful and an injurious insect, with the metamorphoses they undergo.
3. Compare the respiration, circulation, and skeleton in a bird and a mammal.

*Section II.—Botany.*

4. What are the essential organs of a flower, and why so called? What is the difference between a seed and a spore?
5. How do roots and leaves absorb nourishment, and what are the principal substances taken in by each?
6. Name *three* useful leguminous, umbelliferous, and solanaceous plants. Describe the flower of a grass, and name a few fodder plants belonging to this family.

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*2nd Year Students.*

Written Examination in ANATOMY OF DOMESTICATED ANIMALS.

Time allowed for this Paper two (2) hours.

*Examiner*—Mr. S. S. CAMERON, M.R.C.V.S.

1. Describe the origin, course, and distribution of the inferior laryngeal nerves.
2. Name the parietal, visceral, and terminal branches of the posterior aorta, and state where they are given off.
3. Describe the mucous membrane of the alimentary canal from the lips to the anus, naming the different papillæ, villi, and glands present throughout.
4. Describe the structure of the omasum of the cow; give its situation and relative position to other organs.
5. Apart from size, how would you distinguish the uteri of a mare, cow, bitch, and sow from each other.

*Note.*—The three first questions refer to the horse.

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*2nd Year Students.*

Written Examination in VETERINARY HYGIENE, SANITARY SCIENCE, DIETETICS, and STABLE MANAGEMENT.

Time allowed for this paper two (2) hours.

*Examiner.*—Mr. A. P. GRIBBEN, M.R.C.V.S.

1. Give a suitable daily ration for horses (light and draught) in hard work, and state the feeding values of the constituents.

2. State fully the predisposing causes of parasitic invasion of sheep, and what instructions you would give as to prevention.
3. Explain the points you would note when examining a stable as to sanitation.
4. Give the proper management of horses before, during, and after transport by sea.
5. State how different management influences the losses from "pleuro-pneumonia contagiosa" in travelling cattle.
6. What do you understand by "disinfection," what agents would you use, and how apply them?

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*2nd Year Students.*

Written Examination in PHYSIOLOGY and HISTOLOGY.

Time allowed for this paper two (2) hours.

*Examiner.*—Dr. W. L. MULLEN, LL.B., M.A.

1. Describe the ductless glands and their uses.
2. Describe the functions of the different parts of the eye.
3. Describe the minute appearances—
   (1) Of the small intestines.
   (2) Of an artery.
4. Describe the functions of the pneumogastric nerve.
5. Describe the chemical nature of respiration.
6. Describe the causes of hypertrophy.

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*3rd Year Students.*

Written Examination in MATERIA MEDICA, PHARMACY, THERAPEUTICS, and TOXICOLOGY.

Time allowed for this paper two (2) hours.

*Examiner.*—Mr. R. NICHOLLS, V.S., Ph.C.

1. What principles must guide you in the application of disinfectants. Explain the action of the following:—
   (*a*) Carbolic and cresylic acids.
   (*b*) The fumes of burning sulphur.
   (*c*) Caustic lime in the form of lime wash.
2. Give three good examples of antacids suitable for veterinary practice, also dose in each case.
3. What is apomorphine, and how is it prepared? Give the action, with doses and mode of administration.
4. Prescribe a vermifuge draught for round-worms in horses. Also pills for tape-worms in dogs.
5. What are the symptoms of poisoning by arsenic, lead, strychnine, and give antidotes in each case.
6. "Potassium." Enumerate the various preparations chiefly used in veterinary practice — medicinal properties — doses for various animals, and antidotes in case of poison.

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XUM

*3rd Year Students.*

Written Examination in MORBID ANATOMY, PATHOLOGY, and BACTERIOLOGY.

Time allowed for this Paper two (2) hours.

*Examiners.*—Dr. J. W. SPRINGTHORPE, M.D., M.A., and Mr. S. S. CAMERON, M.R.C.V.S.

1. Define the terms "abscess," "ulcer," "caries," "necrosis," "gangrene."
2. Describe fatty degeneration, and state in what organs or tissues it is most frequently found in the horse, ox, and dog. Give an example of physiological fatty degeneration.
3. Describe inflammation of a serous membrane, and state the possible terminations.
4. Describe fully the various stages in the development of a tubercle in lung tissue.
5. Describe four pathogenic micro-organisms, detailing the conditions as regards food and environment necessary for their growth and multiplication.

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*4th Year Students.*

Written Examination in PRINCIPLES AND PRACTICE OF VETERINARY MEDICINE.

Time allowed for this Paper two (2) hours.

*Examiner.*—Mr. E. STANLEY, F.R.C.V.S.

1. Give the diagnostic symptoms, pathology results, and remedies in laminitis, tick-fever, enteritis, actinomycosis, swine-fever, distemper in canines.

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*4th Year Students.*

Written Examination in PRINCIPLES AND PRACTICE OF VETERINARY SURGERY.

Time allowed for this Paper two (2) hours.

*Examiners.*—Mr. S. S. CAMERON, M.R.C.V.S. and Mr. W. D. ROGERSON, M.R.C.V.S.

1. Mention three skin diseases affecting the horse, detail their symptoms and distinguishing features, and give an outline of appropriate treatment in the different stages of each.
2. What untoward results may follow the removal of a molar tooth (horse) by trephining, and what steps would you take to avoid and to mitigate such?
3. Describe "mammitis" in cows, stating the causes, symptoms, treatment in different stages, and possible termination.
4. State what you know of the causes of "foot-rot" in sheep, and describe the treatment you would adopt, both preventive and remedial.

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## ADVERTISING AND UNPROFESSIONAL CONDUCT.[1]

BY PROFESSOR MACQUEEN.

I PURPOSE very briefly with your permission to refer to some points in connection with advertising and unprofessional conduct, and if there are any very super-sensitive friends present I hope they will at once accept my apologies and my assurance that I make no personal reference to any one. I propose to trace advertising from its commencement at the time of the starting in practice of the recent graduate.

Having gained his diploma, the young man makes up his mind to start for himself, perhaps returning to the district where he was born, or going to some other place where he thinks a suitable opening exists. There are several things he may do; some he neglects to do, some he will not do, although I believe he is quite entitled to do them by way of preliminary to starting on his own account. First of all, he probably has an address card prepared, upon which he gives his name and his qualifications, and I see no objection—and this is the first point of discussion—to his adding a summary of the honours, the medals, or the certificates he may have obtained during his collegiate course. I know there is an objection to that sort of thing, but I must say for myself I see no harm in a recent graduate issuing a card containing these various items. Another thing he may do is to issue a circular, which I consider a perfectly legitimate proceeding, and I say so whether that circular is issued in the home district of the recent graduate, or the district he has selected. He may issue a circular to horse-owners and others who are likely to become clients, and he may also intimate that he is about to commence the practice of his profession by notice in the local press. Then, if there should be a local directory, I think he should have his name inserted, with his qualifications.

I maintain that the young practitioner is perfectly entitled to use thsee means, and sufficient justification for at least a part can be found in the Medical Directory. If you refer to the Medical Directory you will find the doctors' names set forth with all the titles and qualifications they have obtained; and if they have contributed papers, written a book, or held appointments, the facts appear under the name of the individual in that directory. I do not see why in our profession some one who has sufficient time and energy should not arrange for the publication of a Veterinary Directory containing the names of practitioners, young and old, throughout the country, with their various qualifications, appointments, and anything that may be suitably added in connection therewith. Perhaps the publisher of *The Veterinary Record* could be induced to undertake this work.

But there are two or three things that may be objected to when a young practitioner starts. On his card, circular, or other notice, I object to his writing M.R.C.V.S.*L.* That I think is superfluous, and it suggests something more than nonsense; it seems to me in some instances to suggest that the individual responsible for its production is inclined to think it carries some added dignity. I think the final "L" should be dispensed with on the ground of bad taste, and perhaps on the ground of being superfluous. Another thing I object to is the abuse of the title "Professor." I think that recent graduates or young practitioners are not

[1] Read at a Meeting of the Central Veterinary Medical Society, held at 10 Red Lion Square, W.C., 9th January 1902.

likely to be called professors, but sometimes they have been known as assistant-professors. I think the name professor should not be assumed by those who are not entitled to assume it, and although there is no very hard and fast line as to who shall or who shall not use the title, I do think that those who may have a sort of *quasi* claim to it ought to think twice before they use it, or, as I would put it, abuse it. So far as I am concerned, the name of professor is not pleasing, and I should certainly live quite happily in this world if there was no such title. My conception of a professor is a man of about eighty years of age, with a head like Lord Kelvin, with flowing locks, like those worn by the late Joseph Gamgee, a man who has lived through various periods in a profession, whose experience is beyond question, and who is certainly entitled to the real dignity of being called a professor. Every man must work up a position in this profession as in any other. At the same time I do not think that because one happens to have had the accident of obtaining a position which is sometimes spoken of as a professorship there is any obligation on the part of the holder, either while he is in the situation or after he leaves it, to continue to use the name. Probably there is some unseen benefit to be derived from exploiting the name of professor, but I have not been able to derive any special advantage from it.

The young practitioner, having issued his cards and circulars, thinks about a signboard or a name-plate, or both. How large ought a signboard to be? This is a question which ought to be definitely decided by the profession or by the Registration Committee, the body responsible for the good conduct of the profession. Must a signboard be readable at a distance of 100 yards, or must it be approached to within a distance of 25 feet? What should be the limit of the size of the letters, and should they be plain or coloured? I have no objection to a signboard, but I certainly should not have one if I were about to practise on my own account. A brass name-plate, or a similar thing, I think is advisable, if not absolutely essential, and a small one is sufficient, but here again there are variations in the size of the name-plates, as any one may see who keeps his eyes open when travelling about the country. Another question is, whether duplicates should be allowed or not? Some think they ought to have a signboard above the archway leading into the infirmary, that you ought to have a large brass-plate on your front door, and if there is a four-foot garden in front, a brass-plate in front of that. If there is a street corner within 100 yards of the residence it is thought that you ought to obtain permission to put up a large signboard directing attention to the fact that Mr. So-and-So, M.R.C.V.S.*L.*, is in practice down the road. I do not agree with those who have that sort of opinion. I do not believe in duplicate signboards or duplicate brass-plates.

I believe that a professional man should be unassuming; and perhaps I ought to make a correction at this moment to prevent misapprehension. When I said that the young practitioner is perfectly justified in issuing circulars and in notifying his advent to the town in the local press, I intended to add—for a limited time only. I do not mean to say that he is to continue it throughout in the same way as he continues his signboard. He makes his intimation when he arrives, but his signboard and name-plate exist as long as he can hold out against adverse circumstances.

Then there is the question of the solicitation of clients, which is said to be largely practised. I do not say that this is confined to recent graduates,

but from what I hear there is a good deal of solicitation of possible clients going on. This I regret, for solicitation of clients, whether they are no man's clients or another man's clients, solicitation by direct action, or by any mode of circumlocution, is condemnable and should be condemned. There is no worse feature in practice than the system of huckstering, kowtowing, and trying to seek patronage, when self-respect ought to teach the professional man that if he is worth anything he certainly should not make application for employment. The notification in the press or by circular of the fact of a man commencing practice and the possession of an address card are things which are necessary if a young man is to make a beginning at all. But solicitation is not on the same plane.

Should a veterinary surgeon when starting, or subsequently, have a forge? First of all, is there anything derogatory to the veterinary surgeon in keeping a forge? I say there is not. The very history of the profession indicates that without the forge there would have been a very small profession. We were cradled in the forge, by the forge we have lived and moved, and without the forge I do not believe we should maintain our position. The forge in many places, if not in all, is a necessity, and I do not agree with those who look upon a forge as derogatory to the position occupied by the professional man. One objection is that it savours of trade. Well, on paper we are professional men, but there is a good deal of trade about the profession, and there is no use trying to look round the corner and imagine that we are different from what we are. To a large extent veterinary surgeons are tradesmen, and although they may be entitled to something slightly different according to the peculiar character of their class of work, they still participate in most of the attributes characteristic of trade.

There is another way of looking at the forge, apart altogether from the question of whether it is derogatory to the professional status or not. Will it help the young practitioner? I say that so far as successful practice is concerned he will find a forge of benefit. Perhaps there are exceptions or exceptional districts, but in most instances I think the forge may be described as an acquisition when properly conducted.

Then there are certain other points. The young practitioner is not fully occupied; he is probably unmarried, and he has more spare time than he can usefully employ. Should he spend much of his time inside the public room of the hotel? I say no. The less he is seen about the inside of the hotel the better for his own reputation. He may be a teetotaller or he may be extremely temperate, but if he is seen inside the building then his reputation will suffer amongst those who think about such things, and in all country towns there are a fair number who seem to have very little else to do.

Should he try to curry favour with grooms? I say no. He should keep his position and keep the grooms in their position, if he can. It is not easy, but if the young practitioner respects himself then he will find that the grooms will not take advantage of his good nature. Of course there is always an ulterior motive in hobnobbing, and that is the prospective client.

When he has been in practice some time he perhaps thinks he ought to communicate with *The Veterinary Record*, *The Veterinary Journal*, *The Veterinarian*, or *The Quarterly Journal of Pathology*, and as a rule he does not make the first jump without having something very extraordinary. As a rule his first case is a regular shocker, but the animal recovers, which

always adds to the marvel of the first communication. These communications to professional journals should be encouraged. I say by all means write to the professional journals, and if you can only find extraordinary cases record them, but occasionally, if you wish to enhance your reputation for veracity, you ought to interlard the extraordinary reports with a few everyday occurrences.

But it is a different thing when practitioners take to writing for the lay press. I object to that. I do not care whether a professional man has performed a very extraordinary feat in surgery, brought about a marvellous recovery, or done two extraordinary things, or three; I do not admire the man who thinks the best method of obtaining notoriety or of adding to his reputation is by publishing the facts in a lay journal. I believe it is a mistake, and although the individual who practises that sort of thing may not lose immediately, eventually he will suffer in the profession, that is to say, the profession will look upon him with a somewhat lower estimate.

Another thing which may be objected to, and I think it is important, is the giving of testimonials in favour of shoes, pads, condiments, pills, bile-beans, veterinary instruments, and various other things. I do think a veterinary surgeon ought to consider well before allowing his name to be connected with any patent medicine or food; and, to my mind, testimonials in favour of instruments are wrong. There can be no objection to the veterinary surgeon exhibiting and even praising the instrument at a meeting of his professional brethren, but he certainly should not allow his name to be attached to a fly-leaf or public notice explaining the marvellous facility with which a horse can be cut, or some other operation can be performed by this, that, or another instrument. What do you think of our instrument catalogues? Do they not offer a sad reflection on what we call our professional taste? If we refer to a page we shall see that this or that instrument was suggested by Mr. So-and-So, and another instrument is followed by brackets enclosing a name, without saying whether he suggested, invented, or improved it. But something akin to genius is required of the man who would invent a new veterinary instrument to-day; and it would not be difficult to show that many of our recently introduced instruments and apparatus are very like similar things which have been in existence for at least twenty years. Those who ask an instrument maker to furnish a modification of an instrument should have the grace to see that the source of their inspiration is duly acknowledged. If a man on a Continental trip looks into the instrument shops of Paris, Brussels, and Berlin, he cannot fail to see many instruments and apparatus which might be useful to the profession here, and if, as the result of that, he has something altered or modified, or, as it is called, "improved," and it is connected with his name without acknowledgment of the original, would his conduct be right or wrong?

I do not intend to touch the question of double commissions, horse-dealing by members of the profession, and the employment of unqualified assistants. They are important enough, but their consideration must be left to those who take part in the discussion. With regard to our position in relation to the governing body of the profession it would appear that there are certain things we may do, whether we are young or old, without incurring the displeasure of the executive. Taken together they constitute legitimate conduct. I am not aware that any one has attempted an explanation of our privileges, but there need be no doubt about our restrictions.

Our blockhouse line is furnished by bye-law 113, which stands in the register for 1901 as follows :—

> "That advertising by veterinary surgeons, or causing or permitting other persons to advertise for them, whether by paid advertisement or by editorial or other notice in the public press, or distributing or causing or permitting to be distributed circulars, books, or cards relating to their professional attainments or abilities or charges, or in respect of medicines or appliances prepared or sold by them, amounts to conduct disgraceful in a professional respect within the meaning of section 6 of the Veterinary Surgeons Act, 1881."

That is the bye-law which governs our professional conduct, and you will have noticed that I have suggested the doing of certain things which run counter to the bye-law. To those who think with me, and especially to the younger members of the profession, I would suggest that they should make an effort to have this bye-law modified and brought into harmony with the needs of existing conditions. This will not be done by reproaching the members of the Registration Committee or by defying them; but I think it can be effected by voting with a purpose at the election of Members of Council. Those who feel aggrieved should adopt that course. Meantime they should remember the restrictions of the bye-law, and endeavour to avoid doing anything that can be construed into conduct disgraceful in a professional respect. If I were to start practice to-morrow, perhaps I should not be so particular. Very likely I should venture to issue a circular and wait events. If the Council removed my name from the register I should appeal, and if I could show to the satisfaction of the Privy Council that the statement on my circular was true, I believe my name would be restored.

I should have gone further had I more time, but I feel that I have taxed your patience sufficiently already. I must apologise for the absence of the necessary sequence which is usually characteristic of addresses or papers submitted to *The Central Society*, and I am sorry indeed to be the first to offend in that particular, but the notice I received was very short, and I did not like to deny my friend Mr. Rogerson. I submit these points for your discussion, and I hope you will overlook the many defects of my efforts.

DISCUSSION.

The PRESIDENT expressed the indebtedness of the Society to Professor Macqueen for introducing so important a subject. He considered the suggestion of a veterinary directory to be admirable.

Colonel NUNN saw nothing derogatory in keeping a forge. He kept a forge for thirty-five years for the late Queen. If he was practising himself he should certainly have a forge as one of the first things. With regard to the question of trade or profession, his opinion was that to run a trade down was an arrant piece of snobbery. This was the twentieth century, and it was better to open our eyes to the fact that with the public the man with the most money was the best man. The public did not mind how he made it. With regard to names in catalogues, he did not know why a *bona fide* inventor should not place his name after his instrument, even if he had only adapted the instrument. In the medical profession names of inventors and adapters of instruments were almost household words, such for instance as Spencer Wells' Forceps and Syme's Knife. As to bye-law 113, Professor

Macqueen would issue a circular, and he would do the same. In the event of anything happening he should not go to the Privy Council, but should apply for a mandamus in the Courts for the Council to show cause why he should not have his name replaced on the register, and he thought he should be successful in obtaining an injunction.

Mr. BUTTERS thought that some years ago he received a circular suggesting a veterinary directory, and was asked to send in his name, the date of his diploma, and all qualifications, but probably the matter did not interest the profession, and it was dropped. He quite agreed that such a directory would be very useful, although it would be contrary to bye-law 113. With regard to signboards a friend of his once suggested that an archway leading into a forge should be covered with a large model shoe framing the archway with the words in large letters "No foot, no horse." Would that be a signboard, or simply an ornament? He thought the veterinary profession generally was at fault in not communicating more than they did with the lay press. It was a difficult subject, but he did not see why veterinary surgeons' names should be only associated with cases of cruelty in the police court or in county court cases over disputes as to the soundness of horses. A short paragraph stating that some very successful operation had been performed, or the successful fitting of false teeth to a dog or horse, should not be considered disgraceful conduct.

Mr. VILLAR considered that most of the remarks of Professor Macqueen were more suitable for a class of students than for men who had been in practice for some time. With regard to cards and circulars, he considered there was absolutely no objection to a card or circular in itself. The great thing was the wording. Professor Macqueen said that solicitation, the seeking of patronage, should be opposed to a man's feeling of respect. A circular announcing that a man had started in practice was all very well, but surely circulars were really issued for the sole purpose of seeking patronage. He agreed with Professor Macqueen that there was no objection to any man describing his qualifications, provided the man issuing the card formed a proper opinion of what his qualifications were. Any man would be justified in saying he was a Member, Fellow, or Professor on his card, but he might go further and say he was a veterinary surgeon, and had been so for fifteen years to a home for lost dogs, and that could not and should not be described as a qualification, although a great many veterinary surgeons and a large proportion of the public would consider it was a qualification. He was entirely with the Professor in not being able to understand a man putting the letter L after the M.R.C.V.S. There was a gentleman of his acquaintance who described himself as M.R.C.V.S.E. & L. (Laughter.) The size of a signboard was a detail; a great deal depended on how far off the signboard had to be seen. If a man's place was in the middle of a meadow, to get it recognised as a veterinary infirmary by people travelling on the railway a quarter of a mile away he must necessarily have a very big signboard, and he did not see that there should be any objection to that. In a London street a signboard of a large size was objectionable. Professor Macqueen said that the professional man should be unassuming, but after twenty years' practice he was inclined to think that that was quite wrong; a veterinary surgeon should assume all he could. There were exceptions to the benefits to be derived from a forge. A young man starting, if he took a forge, had all the farriers in the district against him, whereas if he started without a forge they generally spoke in his favour, and there was no doubt

that in getting clients a man could not afford to offend those who shod the horses. In some cases a forge might be absolutely necessary, while in others it was a great drawback. He very much regretted that Professor Macqueen neglected to mention the class of individual who called himself a veterinary editor of some lay periodical; a man who sowed broadcast ideas by which he not only robbed the profession as a profession, but also the individual members of the profession. To his mind that was a very serious breach of professional etiquette. The sting of the address was at the end, where Professor Macqueen "went for" the Registration Committee. He himself was not a member of that Committee, but so far as he knew, bye-law 113 was treated in a very wide and liberal spirit by the Committee. Every case was considered on its individual merits, and he was quite certain that every man on the Committee did his best for the benefit of the profession. (Hear, hear.)

Mr. JOHNSON asked what was the opinion of Professor Macqueen with regard to shop windows containing calculi, figures of horses, and bottles of oil prepared by the veterinary surgeon? He gathered that a circular or pamphlet was not allowed by the Registration Committee, but thought the College issued a circular, which it was open to anybody to have for the asking, which contained the price of shoeing, treatment of horses, &c. The veterinary surgeon who was the owner of a forge was a tradesman, and why should not he solicit shoeing; and if the veterinary surgeon did not describe himself as a veterinary surgeon might he send round circulars with regard to his forge?

Mr. HARRISON certainly thought veterinary surgeons should issue circulars stating their qualifications, as otherwise there would be no incentive to a man working and distinguishing himself at College if he could not use it afterwards. He asked what was Professor Macqueen's view with regard to a veterinary surgeon who kept jobmaster's yards?

As the subject under discussion was of a very wide reaching character, and the debate likely to continue, on the motion of Mr. Savournin, seconded by Mr. Harrison, the further consideration of the subject was postponed to the next meeting.

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## DISPOSITION OF DEAD ANIMALS IN FOREIGN CITIES.[1]

(*Continued from page* 53.)

### VIENNA.

(From Hon. Alvesto S. Hogue, United States Vice-Consul and Deputy Consul-General at Vienna.)

Dead animals found within the city limits, after the cause of death is ascertained, are steamed in so-called digesters in the thermochemical establishment, under a pressure of steam of about four atmospheres. The steamed matter is thereby sterilised at the same time. After completed steaming, the resulting fat and limewater are removed from the digester; what remains in the apparatus is dried and worked into meat and bone meal. The products belong to the lessee of the thermochemical plant, who is at the same time the public flayer.

[1] From U.S. Department of Agriculture's Sixteenth Annual Report of the Bureau of Animal Industry for the year 1899.

All animals confiscated by the veterinary police and the meat inspectors are treated in a like manner as are the carcases found in the street. The plant of the public flayer and the thermochemical plant are combined in one and situated at Kaiser Ebersdorf, within the city limits, but isolated and well in the country. The plant is the property of the city and is leased in good running order. The lease was renewed January 1, 1897, and is for five years, the lessee paying $2760.80 for the privilege of operating it for the marketable product he obtains resulting from the thermochemical plant. As city public flayer, he is bound by strict conditions to fulfil the duties of that office.

In connection herewith the new plant for the public flaying of carcases of animals, combined with Podewil's apparatus (flayer's disinfector) for safely reducing the same, at Brunn, Austria, is of public interest. It was constructed by the city in 1898, and is the most complete plant in Austria for the purpose, considered in relation to sanitary and economical principles. It was erected to be in connection with the abattoir now building, and both will be under the same inspection and management. The reasons for joining the plant and the abattoir were both sanitary and economical, because a strict veterinary control is exercised only over the workings of the abattoir, and, besides, most of the material to be destroyed in the disinfecting apparatus comes from thence; further, animals brought by rail to market, if found to be infected with disease, can be delivered directly from the car at the plant without having first to be unloaded, and any such stock driven to market and found infected need not pass by the stock yards. Both buildings are so constructed that the plant may be enlarged in equal degree with any enlargement of the abattoir.

The entire plant consists of three buildings and an open shed, and is surrounded by a solid brick wall. Its shape is a long rectangle from east to west, the dwelling and offices being on the western short side, while the flayer's disinfecting plant forms the northern long side, and the flayer's plant and stables form the southern long side, the open shed forming the eastern short side.

The flayer's disinfecting plant consists for the greater part of the following compartments,—Warehouse for the products of the plant (tallow and hides), for disinfecting, butchering, apparatus apartment with warehouse above it for meat guano, boiler house, coal bunker, laboratory, and the loft for utensils such as machinery and tools.

The plant (system of Podewil) has the following advantages—(1.) The entire manipulation consisting of steaming, sterilising, fat extracting, drying, and pulverising takes place in one single apparatus, whereby the fat of the carcase is rendered, and this fat itself is put into a marketable product by changing it to meat guano. Repeated transportation of the raw material, as also the application of special drying and grinding contrivances are thereby not required. (2.) The strongly nitrogenised meat pulp, a risky article in a sanitary sense, and the liquid waste of the animal carcases, and the washing water from the butchering room, are evaporated to dryness. (3.) The grinding takes place at the same time as the drying, during the most favourable period, when the carcase contains the least per cent. of liquid. (4.) The preliminary process of the rendering is absolutely odourless, because the carcase remains in the air-tight closed compartment till the finish. (5.) The apparatus is not only adaptable for carcases, but also for blood and all kinds of waste of animal origin.

*Construction of Drums.*

The principal part of the apparatus is a double-sided drum with double arched bottoms resting on two hollow spigots. The gas passes through the spigot of the one side from a pipe made tight with a stuffing box first into the one double bottom, from this into the heating mantle as well as into the other double bottom. The condensed water in the heating mantle is conveyed through a pipe provided with a stuffing box through the same spigot, and generally used again in the boiler. Steam can also be let into the interior of the apparatus through a branch pipe. The steam arising in the drum is conveyed through a pipe to the condenser. This pipe is perforated like a sieve, can be turned by means of a crank from the outside, and is connected with a small straining device. This is a hollow free-moveable roller in the inside of the drum. All parts of the apparatus are of the best material, the drum being made of carefully welded strong boiler plate, and the spigots of forged steel. The cog device for driving the drum is screwed tight to one of the bottoms, so that the spigots are free from torsion. The exterior of the drum is provided with a light covering as a protection against loss of heat.

*Construction of the Separator for Fats.*

The separator for fats consists of a simple vessel which receives the fat and the meat pulp for a short time in order to enable the thorough separation of the fat. The drum is filled with material, the manhole closed, and then the first part of the process is to pump out the air with an air pump. Then the steaming process begins by letting steam into the interior of the drum. The steam is conducted directly into the carcase, and heats the same to 160° Celsius. By this intensive procedure nearly all the fat and glue are obtained from the material. The bones are softened, and the sinews and hoofs lose their firmness, and in a few hours constitute a pulp. The drum, which up to this time has remained stationary, is made to rotate slowly for a little while. Thereby a mild movement is caused in the mass as long as it is of a nature of pulp, which is necessary to disintegrate the softened pieces and to facilitate the separation of the fat therefrom. The apparatus is then left at rest, and the swimming fat is forced through a pipe into the separator. For this process the conducting line to the separator is opened and the pipe is raised by a lever until it touches the upper surface of the fat. The pressure in the drum forces the fat into the separator along with a part of the meat pulp in order to save all the fat. The fat is forced out of the separating vessel by means of a revolving pipe, and the meat pulp is forced back into the drum, where it and the remainder of the carcase are easily dried. In the meantime the drum is set in motion, and the double mantle as well as the bottoms heated by steam for the purpose of drying. The vapours arising during the drying process are conducted by a pipe to the condenser. The steaming in the revolving drum is continued until the matter in the apparatus is converted to a powder by the freely moving roller within it. After complete drying the manhole is opened, whereupon the apparatus after forty revolutions empties itself automatically. The fertilising powder is finally thrown through a grated sieve, and the remaining lumps collected and returned to the apparatus, where the process is repeated.

On the basis of statistics it has been computed that there will be

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220,000 pounds of carcases and parts of carcases to be treated annually. Such a quantity requires continual working of the plant for a rational use thereof, and a daily capacity of 770 pounds of crude material, for which reason a Podewil's apparatus (No. 1) was selected. This apparatus works off this quantity in twelve to fourteen hours, hence it is possible to fill it twice in twenty-four hours: and the plant offers security for even greater demands to be put upon it, as an enlargement of room is allowed for by a suitable construction of storage space for the setting up of a second drum apparatus (No. 1), for which the present driving machine and boiler are sufficiently large. Therefore, by placing a second drum apparatus and working night and day, four times the quantity (880,000 pounds) could be annually handled.

The boiler is arranged for possible enlargement in the first plant for double daily heating—that is, with 11 square yards of firing surface and constructed like Cornwall's steam boiler, with lateral furnace pipe for six atmospheres of pressure above atmospherical pressure. The machine in a lying position is constructed with simple sliding regulator without condensation, with throttle-valve regulator, which in 100 revolutions per minute and 6 atmospheres of boiler tension is equal to 6 to 10 indirect horse-power.

Adjoining the apparatus room is the dissecting room. It is connected with the apparatus room, and the walls of the broad, high, and well-ventilated space are covered to a height of over 2 yards with glazed tiles. The floor is cemented and arranged with the incline towards the middle. At the lowest point a thickly cemented pit is constructed, which may be closed with a moveable air-tight cover, to which all the refuse liquids and the rinsing water coming from the dissecting table are conducted. This pit is baled out every time it is used, and the contents evaporated in the steam apparatus. Watering hose have been provided for the thorough cleansing of this as well as of all other rooms.

The parts of carcases are sent directly from the dissecting table to the manhole of the flayer-disinfector by means of an iron trough affixed above it through the partition wall, and this trough is afterwards rinsed with water.

In the flayer's building, besides a dwelling consisting of two rooms, a chamber, and a bathroom, there is a cage for healthy dogs, an observation cage for sick and suspected dogs, a stable for the horses belonging to the flayer's building, an observation stable for sick cattle, and a waggon house. All the places destined for the reception of animals are fitted up with water-tight floors and cemented walls, and are provided with a washable coat of oil paint. The dog cages are constructed of iron and wire, and by a sliding door rolling upwards or by lifting up the cage roof. The dogs are provided with food and water by means of a feeding trough adjusted to the left side of each cage and moving on a horizontal axis, which trough is turned outward, filled with food, and then turned in again. The bottom and back of the trough while turned outward close the aperture thus made in the cage, so that any injury to the person providing the food is excluded. The entire plant is provided with drainage, but none of the refuse from the dissecting-room and laboratory, nor of the quarantine stables, gets into the sewer system. This is collected in pits constructed for the purpose and evaporated to dryness in the Podewil apparatus.

The powder obtained in the flayer's disinfector from the remains of the carcases is similar to coarse-grained brown garden mold, is but little greasy to the touch, and has no unpleasant odour. On account of its great nutritiousness it is an excellent food for hogs, and has now become so popular that the demand for it far exceeds the quantity produced.

### BELGIUM.

(From Hon. George W. Roosevelt, Consul at Brussels, Belgium.)

The Minister of Agriculture proposes to grant a contract for all Belgium for removing and destroying by a special process dead animals recognised as unfit for consumption. According to the present project elaborated by this department, fifteen establishments for skinning and destroying animals will be constructed, and later on, if found necessary, the number will be increased.

Each establishment will be furnished with a steam generator and at least one autoclave (digesting furnace), in which animal matter will be destroyed by steam heat at a temperatnre of about 150° C. This autoclave, built according to the latest improvements, closes hermetically, and is provided on the outside with a manometer and index plate, permitting a view of a process of operation. The gases produced in the autoclave are carried by means of appropriate pipes into the furnace of the generator, where they are completely burnt and destroyed. The skinning plants will be provided with necessary arrangements and instruments for handling and cutting dead animals, as well as with apparatus well provided to collect the subproducts. The products of incineration do not emit any pernicious odour after operation. The matters very rich in phosphates will be sold and utilised as fertilisers.

The diseases which will necessitate the destruction of the bodies of animals are glanders and farcy in horses, mules, and donkeys; contagious pleuropneumonia, typhus, and anthrax in cattle, sheep, and horses; and tuberculosis in cattle. Such carcases as are actually intended to be sterilised in special works authorised by the Government are excepted. Meat coming from such bodies is considered fit for consumption after sterilisation.

### BRUSSELS.

(From Hon. George W. Roosevelt, Consul-General at Brussels, Belgium.)

It is customary in this consular district that dead animals, especially horses, are disposed of by sale by their owners. Dead cats and dogs are thrown into the garbage boxes and removed, as well as such as may be found on the public highways by the scavenger carts. Frequently the skins are removed and sold by the scavengers, and the carcases incinerated or dumped on the garbage farm. Abandoned dead horses and cows are removed to an inclosure set apart for the purpose of skinning dead animals. After the skin is removed the carcase is destroyed by sulphuric acid and the refuse reduced to powder and used in making chemical fertilisers.

The following is a translation of an extract from the police regulations of May 20, 1874, relative to the disposal of carcases of dead animals :—

ARTICLE 129. Dead animals shall be immediately buried. Such as die from disease recognised or suspected as contagious must be buried in

trenches 2 meters [6·35 feet] deep at least 100 meters [328 feet] distant from any habitation. Others in trenches 1½ meters [4·92 feet] and at a distance of at least 75 meters [246 feet] from any habitation. The ground for this purpose is always designated by the Commissary of Police. In case of infraction of this law the communal administration will order the disposal of the dead animal at the expense of the offender, independent of fines mentioned in the present regulations.

ARTICLE 130. It is forbidden to skin dead animals within a distance less than 3000 meters [984 feet] of any habitation or public road. Before skinning animals, the knackers must on each occasion make declaration before the Commissary of Police. The carcase of the animal will be taken to a designated place and immediately interred.

ARTICLE 131. The removal of dead animals, such as horses, cows, calves, asses, or mules, to be effected by means of covered carts.

ARTICLE 516. Violations of the present regulations, for which the law does not prescribe any special penalties, will be punished by a fine from 1 to 25 francs [$0·193 to $4·825], with imprisonment from one to seven days, or by one of the aforesaid penalties only.

The following regulations were issued on July 3, 1899, by Léon Bruyn. Minister of Agriculture and Public Works, of Belgium:

SCHEDULE OF DIRECTIONS, PROVISIONS, AND CONDITIONS IMPOSED UNDER THE CONTRACT FOR THE REMOVAL AND DESTRUCTION OF BODIES OF DEAD ANIMALS KNOWN TO BE UNFIT FOR CONSUMPTION BECAUSE OF CONTAGIOUS DISEASES.

The Minister of Agriculture and Public Works will publicly award the contract, under reservation of the approval of the legislature, in case of the continuance of the agreement, the 21st of August 1899, at eleven o'clock A.M., on the premises of the Minister of Agriculture and Public Works, at Brussels, for the undertaking of the removal throughout the country and destruction of the bodies of dead animals found to be unfit for consumption because of contagious diseases. The enterprise will be conducted under the conditions and restrictions hereinafter defined.

SECTION 1.—*Removal and Transportation of Bodies of Dead Animals.*

ARTICLE 1. The contract comprises the removal, the transportation, and the destruction of the carcases found to be totally unfit for consumption because of diseases hereafter designated, with the exception always of the animals which the owners should remove and destroy in the regularly authorised inclosures other than those included in section 2.

These diseases are (1) glanders and farcy in the horse, the ass, mule, and donkey; (2) contagious pleuro-pneumonia in bovines; (3) contagious typhus in the ruminants; (4) anthrax in cattle, sheep, and horses; (5) tuberculosis in bovines, except in case of carcases regularly designed to be sterilised in the authorised works for this purpose, and to be consumed after sterilisation; (6) any other disease which may be hereafter designated by the Minister as coming under the application of this article.

ARTICLE 2. The transportation of the bodies to the inclosures where they are to be destroyed should be performed with the shortest possible delay, and in all cases as follows:—(*a*) Within twenty-four hours after the receipt of the notice for removal in case of its being animals affected by

bacterial carbuncle (anthrax), and (*b*) within thirty-six hours after the receipt of the notice for removal in case of all other diseases.

Sundays and holidays are not included in the delay, but the contractor is bound to take measures to prevent the removal of the carcases by any persons not authorised to do this work. The notices are given by the Mayor of the place where the bodies are found, by telegram, in the first case, and by postal card or letter in the second case. The cost of the telegram is upon the contractor.

ARTICLE 3. The transportation of the bodies must be made in receptacles which are perfectly waterproof. These receptacles must be accepted by an agent of the Minister of Agriculture. Each of these receptacles will be furnished with a plaque showing that it is accepted, and also its weight when empty. In case of damage to any of the receptacles the contractor is held to employ every necessary means to absolutely avoid the running or escaping of the liquids.

ARTICLE 4. The bodies removed in pursuance of this contract must be acknowledged by the contractor or his agent. This acknowledgment is to be given to the Mayor of the place from which the removal is made, by means of a certificate detached from a register. This book is furnished by the Department of Agriculture, and kept in conformity with instructions of the Minister.

There will be as many of these books kept as there are inclosures in the execution of section 2, and, besides, a duplicate of each of these books must be kept at the office of each inclosure.

ARTICLE 5. After having acknowledged and given a receipt for the bodies, as explained in the preceding article, the contractor or his agent is required to perform the disinfection by means of a solution of acide phenique (carbolic acid) or creoline (?), or any other substance which is accepted by the Minister.

The removal of the bodies is made under the responsibility of the contractor. The bodies must be taken directly to the respective inclosures, the delay not exceeding the normal time required by the method adopted by the contractor. The time is reckoned from the moment when the bodies are put into possession of the contractor. The register shows the hour of leaving and the hour of arriving at the inclosure.

ARTICLE 6. In case of loss by theft or otherwise of all or part of a body, or in case of refusal on the part of the owner of the animals to allow their removal to the inclosure belonging to the contractor, he or his agent shall make an official report according to the formula furnished by the Minister of Agriculture. A copy of this report is left with the Mayor, and another copy is addressed to the veterinary inspector in the district where the animals are found. In case of the partial removal, the report must be accompanied by the statement of weight mentioned in article 10. These official reports are noted in the registers.

ARTICLE 7. The Department of Agriculture cannot be held responsible for any of the consequences resulting to the contractor under the preceding article. This will be the same in cases resulting from the absence or late delivery of the notices referred to in article 2.

ARTICLE 8. In case of delay in removal or transportation of the animals the contractor is liable to a fine of 50 francs.

ARTICLE 9. In case of loss, from any cause whatever, of all or part of a body for which a receipt has been regularly given by the contractor or by

his agent, in conformity to articles 5 and 6, the contractor is liable to a fine of which the sum is to be adjudged by a competent veterinarian, shall not surpass 500 francs, and this without prejudice to the provisions of article 19.

ARTICLE 10. On arrival at the inclosure the carcase is weighed by an agent who is under oath for this purpose. The weighing is done according to the instructions of the Minister by means of automatic weighing machines which register the weight, this being verified exactly by an agent of the Minister.

The bulletin of weight of each animal, as well as all the instructions by the Minister, must be supplied through the care of the contractor under a competent veterinary inspection within two days after the arrival of the carcase in the inclosure.

SECTION 2.—*The Organisation of the Inclosures and Destruction of the Carcases.*

ARTICLE 11. The destruction of the bodies shall be performed in fifteen inclosures for skinning and cutting up, and shall be established within the limits prescribed by the Minister. The number of inclosures may be extended to seventeen if the Minister finds it necessary. The site for these last inclosures shall be chosen in the same manner. The management of these inclosures must be made conformable with the regulations upon that subject.

ARTICLE 12. The products of the bodies and parts of bodies destroyed within these inclosures are the property of the contractor.

ARTICLE 13. The Minister will indicate, in accordance with the localities where the carcases are found, the inclosures to which they should be transported.

ARTICLE 14. Each inclosure must contain a steam generator, and at least one autoclave, in which the animal matter is destroyed by steam at a temperature of about 150°. This autoclave should be constructed according to the systematic rules—closing hermetically and being furnished on the exterior with a manometer as well as apparatus indicating the progress of the operation. The gas produced in the autoclave should be completely burned in the furnace of the generator, to which they will be conducted by suitable tubes.

ARTICLE 15. Each inclosure should be provided with appliances and the necessary implements for the manipulation of the cutting up of the bodies as well as suitable apparatus for collecting the subproducts. The bodies are cut and separated in the receptacles in which they were brought, and emptied directly into the autoclave from these receptacles. The cutting up of the bodies affected with anthrax should be done by workmen who are furnished with special gloves.

ARTICLE 16. The animals brought to the inclosures and there held under control of the Government veterinary inspectors should be retained, subject to directions of the Minister. The contractor must conform to the instructions given by the inspectors as to the final preservation of all or parts of the bodies. After the delays indicated by the Minister the bodies are immediately placed in the autoclaves.

ARTICLE 17. The facts obtained through the treatment of the bodies are reduced by means of processes accepted by the Minister. The storage

places of any sort of matter taken from the autoclaves should be free from any disagreeable odour.

ARTICLE 20. The contractor obliges himself to have constantly at his command the necessary personnel to promptly effect the removal as well as the destruction of the carcases. This personnel should include one person capable of making the estimates provided for in article 30 of the regulations concerning tuberculosis in bovines, and the Minister reserves the right to accept for that purpose according to his pleasure.

The employees in the inclosures should be insured against accidents. They are required to always observe the greatest politeness towards the public.

The agents charged with the removal of the bodies are obliged to wear in this service a cap bearing an insignia conforming to a model selected by the Minister.

ARTICLE 25. The contractor must also permit the delegates from the Department of Agriculture to take samples of the products obtained in the inclosures and authorise such trials or experiments as the Minister may judge useful to make there, at the expense of the Department of Agriculture.

ARTICLE 26. The Government cannot be held to intervene in any manner in the payment of the costs and damages to which the contractor may be subjected by the chief of the operations in the inclosures.

### STOCKHOLM.

(From Hon. Edward D. Winslow, Consul-General at Stockholm, Sweden.)

All carcases of animals found dead or of animals which are slaughtered because of injuries are sent to the veterinary institution of this city, where they are put into an oven in order to extract the fat, which is sold to the soap makers. The bones are converted into fertiliser.

The police take up all carcases at the owner's expense. Whatever profit may be obtained from the carcase is a perquisite of the Institute.

### ST. PETERSBURG.

(From Hon. W. R. Holloway, Consul-General at St. Petersburg, Russia.)

Carcases of dead animals in St. Petersburg are removed to a bone factory in the city, where their bones are converted into fertilising materials, soap, and glue.

### AMSTERDAM.

(From Hon. A. Vinke, Vice and Deputy Consul at Amsterdam.)

The carcases of dead animals are burned in an oven at the plant of said service. Unmuzzled dogs running in the streets are caught by the police, and, when not claimed by their owners within four days, are killed and cremated in this oven.

# A REVIEW OF THE PAST FEW YEARS ON MATTERS OF INTEREST AFFECTING DIRECTLY THE VETERINARY PROFESSION.[1]

BY J. H. CARTER, M.R.C.V.S., BURNLEY.

Mr. President and Gentlemen,—Owing to my unavoidable absence at our last meeting, I must in the first place take this opportunity of expressing my most grateful thanks for the honour you did me at the meeting of this Association held last April, by nominating me as your candidate for election to Council of the Royal College Veterinary Surgeons, and also for the splendid manner in which you, along with the Eastern Counties, Midland, and Yorkshire Veterinary Associations respectively, supported my nomination, which, as you are already aware, secured my return to the Council by a very gratifying majority of votes. I assure you, gentlemen, I appreciate this mark of confidence in no mean degree, and I can only promise in return that I will endeavour to attend to the important duties appertaining to that position with fervency and zeal. Last year, as you are aware, Mr. Lockie and myself were elected Vice-Presidents of the College, which I look upon as not only an honour to ourselves, but an honour to the Lancashire Veterinary Association. And now this year we can rejoice in the fact that one of our members has been elected to the highest position it is possible to attain in the profession, viz., President of the Royal College of Veterinary Surgeons. I refer of course to our esteemed member Mr. Alex. Lawson, and I am sure you will all join with me in offering him our sincere congratulations, and I hope he may long be spared to enjoy the proud distinction which has been conferred upon him, and which he had so amply merited.

I hope you will pardon me for an address somewhat out of the beaten track, for when our worthy Secretary wrote me some six weeks ago asking if I would introduce a paper at our meeting in December, I must admit I felt somewhat diffident in acquiescing, as, like many of you here present, my spare time is very limited; and then again at that particular period the strife of municipal elections was at fever heat. However, after a little time to carefully consider matters, I decided to take my part in keeping the ball rolling, though I feel sure we have many junior members of this Association who could do better justice to a paper than I can possibly hope to do.

My greatest difficulty was what to introduce that would be interesting to the members, but it occurred to me that, as a member of Council and one of your representatives, a synopsis of the past few years, dealing with matters of importance affecting directly or indirectly our profession, would perhaps prove acceptable. As you are already aware—

*The Public Health* (*Scotland*) *Bill* was passed through Parliament and became law in 1877, with the result that certain sections have been so amended as to give veterinary surgeons, duly authorised for the purpose, equal powers with the medical officers and sanitary inspectors; and one section goes so far as to limit the powers of the medical officer to examine animals unless accompanied by an approved veterinary surgeon.

In the definition clause of the Act the expressions "Veterinary Sur-

[1] Read at a meeting of the Lancashire Veterinary Medical Association held at Manchester, 6th December 1901.

geons" and "qualified Veterinary Surgeons" were stated to mean a Member of the Royal College of Veterinary Surgeons. The definition for the first time gave Members of the College their due pre-eminence as authorities on veterinary subjects, and I think you will agree with me that it is a matter of congratulation to ourselves this passage of the Bill in its entirety, and its favourable attitude towards our profession. We must admit it is encouraging and a step in the right direction, which England will do well to follow. We have been a long-suffering body and know how to appreciate a little mark of recognition of our just merits.

*Lady Students.*—In the year 1897 we were threatened by a member of the so-called weaker sex invading our ranks. A lady sat for and successfully passed the preliminary examination, therefore fulfilling all preliminary requirements, and entered as a student at one of our Scotch Colleges and took out a course of lectures with undoubtedly the idea of eventually becoming enrolled on the Register of the Royal College of Veterinary Surgeons. Now I think you will agree with me that our profession is one totally unsuited and least adapted for the gentler sex, and in accordance with a resolution of the Examination Committee, confirmed by the Council, the lady received notice that the Council declined to admit her to examination. The point at issue really was whether it was lawful to admit women as members of the veterinary profession. The Council of the Royal College of Veterinary Surgeons having formed the opinion that the admission of women was contrary to usage and inconsistent with the Charter of the Veterinary Surgeons Act of 1881, 44 and 45 Vict. c. 62. This action of the Council may appear to women somewhat arbitrary, but is in reality a kind one, as by refusing to admit female candidates to its ranks it is saving them the labour and expense of acquiring diplomas which would practically be valueless to them.

Legal proceedings, however, were commenced against the Royal College of Veterinary Surgeons in the Scottish Courts, which had no jurisdiction, and on this plea dismissed the case, with costs; and so ended the episode of the lady student.

There is, however, I believe one, and only one duly qualified lady veterinary surgeon in Europe, and this new phenomenon in the medical world is Mdlle. Marie Kepezewitsch, the member of a wealthy Russian family. She attended the clinical lectures at Alfort as an ordinary student, attended the classes for eight terms, passed her examinations excellently, and eventually obtained a veterinary diploma.

And according to a paper called *The Sun* (Baltimore) women have there invaded the veterinary profession, and five were enrolled as students in 1897 by the New York College of Veterinary Surgeons with a view of taking the three years' course and qualifying with the degree of Doctor of Veterinary Surgery. They formed the first women's class in a veterinary college in that country, and according to report at that time the New York Institution was receiving letters of inquiry from others every day; it seems they are entering the profession with a view of treating household pets. As for this country, thank heaven the vexed question of granting diplomas to women seems for the time being to be in abeyance.

*The Walley Memorial Fund.*—This is a fund constituted to keep green the memory of one who, figuratively speaking, died on the altar of science. I refer of course to the late Professor Walley, who was undoubtedly one of the best men of his day. The Royal (Dick) Veterinary College, over

which he presided as teacher and principal, rose under his able guidance from a very low ebb to the highest standard of excellence as a teaching institution. He was a splendid teacher, disciplinarian, and a good man, respected and beloved by all who had the privilege of his acquaintance.

The Council of the Royal College of Veterinary Surgeons consented to accept the trust of this Fund, and a deed of trust was accordingly executed by the Council. Its purport is briefly as follows :—

The annual income derived from the Fund—£309 : 1 : 4—now invested by the trustees in consols, is every year to be given to the successful student at a special examination set by the Royal College of Veterinary Surgeons.

The examination is open to all students of all schools now or hereafter affiliated, subsequent to the immediately preceding October who have passed Class "C" four years course, or the corresponding examination for the time being. The subjects are pathology, materia medica, and hygiene. The examination to be a written one, and of not less than two hours for each subject, and to take place simultaneously in London, Edinburgh, and Dublin. Power is given to the Royal College of Veterinary Surgeons to make rules for the conduct of the examination, and this has been referred to the Examination Committee for them to draw up and submit rules to the Council.

I may here state that the Council of the Royal College of Veterinary Surgeons at all times exhibit a keen interest in all measures which tend to the welfare of the profession, and its members may rest assured that the same zeal which has marked their efforts in past years will be continüed in the future.

*The Steel Memorial Fund* is a further example of honouring the memory of another worthy "who has gone to the undiscovered country from whose bourne no traveller returns."

Its object is to commemorate the name of John Henry Steel, and to keep before the profession the bright example of one who was fired with enthusiasm in his brief professional career, during which he achieved marked distinction. It is a post-graduate award in the form of a bronze medal, which was to be awarded annually to members of the profession who have contributed from time to time to the literature of veterinary science whom the Council might select as worthy of the honour. It is now nine years since the fund was handed over conditionally to the Royal College of Veterinary Surgeons, and the Council award the medal. The recipients so far have been the following gentlemen :—Professor M'Fadyean, Vet.-Major now Vet.-Col. Fred. Smith, Dr. Geo. Fleming, Professors Williams, M'Call, Hobday, Dewar, Mettam, and lastly Mr. W. Hunting. At the last Council meeting it was suggested that in future the medal should be in silver, and presented not oftener than once in three years.

The past few years have been marked by many and vast changes ; we have witnessed times of rejoicing as well as times of depression and mourning. The former was marked by the celebration throughout the British dominions of the Diamond Jubilee of the greatest monarch the world has ever known, and the latter marked by the demise of that great lady whose virtues were written and impressed upon the sands of time. Her many and noble virtues were known to all, and her death closes the longest and most glorious of all the reigns of British sovereigns.

Since the death of Queen Victoria we have again rejoiced at the acces-

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sion to the Throne of undoubtedly the most popular man of modern times, in the person of His most Gracious Majesty King Edward VII., and his beautiful and universally beloved Consort Queen Alexandra, and long may they both be spared to rule over these realms with that wisdom, foresight, and tact which were such signal characteristic features of our late Queen.

*Royal Honours* in the past have not been lavishly bestowed on members of our profession. Indeed, considering our infancy, we can hardly be surprised, when we remember the profession as a corporate body is little more than half a century old, for it was only in 1844 veterinary science was emancipated from empiricism. It is, however, gratifying to know that at the close of the eventful reign already alluded to, such honours were bestowed on three of our deserving members, for is it not a fact that during the Diamond Jubilee year Professor Penberthy and Mr. R. C. Trigger received medals from that august lady to be worn by the recipients in commemoration of the 60th anniversary of Her Majesty's reign. And was not Professor George Brown, C.B., also created a Knight. In the Jubilee year 1887, the celebration of Her Majesty's fiftieth year of reign, had not the same gentleman conferred upon him the Most Honourable Order of the Bath?

Sir George Brown is one of the oldest members of the Royal College of Veterinary Surgeons, and was a fellow-student along with my respected father; they studied together and obtained their respective diplomas on the same day, 5th day of May 1847. Sir George Brown has always kept well abreast with the scientific advance of his profession, his success as Chief Veterinary Adviser to the Board of Agriculture was most marked. His thirty years of State veterinary work and half a century of brilliant professional life did more to convince the country of the importance of veterinary science than did any other event of our professional existence.

*Civil and Military Honours* have recently been conferred on some of our deserving members of the Army Veterinary Department, thus showing that State and public recognition come to those who are deserving. The following veterinary officers have also had conferred upon them the honours mentioned below:—

By His Highness The Khedive of Egypt, and authorised by His Imperial Majesty the Sultan of Turkey in recognition of their services in Egypt and the Soudan, during the recent campaign—Order of the Medjidie, Second Class, Vet.-Capt. G. R. Griffiths, D.S.O.; Order of the Osmanleh, Fourth Class, Vet.-Lieut.W. E. Russell.

*The Times* of 20th April 1901 contained in its list of honours conferred by H.M. King Edward VII. the gratifying announcement that the dignity of Ordinary Member of the Military Division of the Third Class, or Companion of the Most Honourable Order of the Bath, had been conferred on Vet. Lieut.-Col. Iles Matthews. Further, that the dignity of Ordinary Member of the First Class, or Knight Grand Cross of the Most Distinguished Order of St. Michael and St. George, had been conferred upon Vet.-Major Charles Rutherford.

This is the first time, I believe, that such high honours have come the way of our profession, and we cannot do less than offer our heartiest congratulations to those gallant officers who have thus been singled out by His Majesty for special recognition of their merits. The honours which have thus been conferred upon our profession are most gratifying, and should

act as an incentive to us all to aim at higher things, and let us hope these decorations already conferred may be the forerunners of others to be granted to meritorious members of our hard-working and long-suffering profession.

*The Army Veterinary Department* in connection with the great war in South Africa has taught the War Office and the country generally some very costly but valuable lessons; one of these is the paramount importance of mounted troops. When the war began, and the Australian colonies offered assistance, the Imperial Government intimated that unmounted troops would be preferred, but by the close of that fateful week which witnessed the disasters of Stormberg, Magersfontein, and Colenso, the Government had learned the paramount importance of mounted troops, and then gladly accepted the service of Imperial yeomen, mounted bushmen, Strathcona's Horse, &c. Hence the importance also of the services rendered by the army veterinary surgeon, whose duty it is to keep the horses in a healthy and fit condition, and guard against the introduction and spread of contagious disease. And the Army Veterinary Department are justified in their claims to some degree of recognition commensurate with the importance of their services in keeping remounts in a "fit" condition. And I think you will agree with me in the opinion that it is high time the Secretary of State for War should recognise our just claims in removing the prefix from our military titles, and so place the Army Veterinary Department on the same footing in this respect with the officers of the Royal Army Medical Corps and other non-combatant departments of the army. The omission to place both departments on the same footing has caused a widespread feeling of surprise and regret in the Army Veterinary Department, which, be it noted, is the only branch of the service with a prefix.

*State Aid Grants.*—The Council of the R.C.V.S. have had before them the subject of "State aid grants," having heard that the Government had lately arranged to allow the Law Society an annual grant of £2500 towards their expenses in connection with the discipline of their members and prosecution of unqualified persons.

It had also been ascertained that on July 20th, 1898, through some M.P., the Medical Council asked for a similar grant, but the Chancellor of the Exchequer said that inasmuch as the solicitors paid a large annual duty to the Government they had some right to expect aid, but it did not apply to professions which did not contribute. Although it was thought this answer would apply to the veterinary profession equally with the medical, yet the matter was so important that it was felt some notice should be taken of it, and after some discussion it was resolved that the General Medical Council be approached with a view to the R.C.V.S. co-operating with them in obtaining a grant of money, as it was thought possible that if joint action were taken by the Medical Council and ourselves something might be done. Even if Parliament gave us only a small annual grant it would be very acceptable, and a great help to a small and deserving profession. The following answer was received from the General Medical Council in reply to a letter of the College of October 18th, 1898, requesting public grants for disciplinary purposes:—

"The Executive Committee have considered the letter of the R.C.V.S. of October 18th, and do not see their way to advise the Council to accede to their request therein contained."

*Our several Teaching Institutions.*—The provision of a sum of £15,000

by the Government has enabled the trustees to found and open a veterinary teaching school in Ireland. In addition to this amount the Royal Dublin Society, with its customary public spirit, is contributing towards the expenses of the New College £200 a year for five years, after which it may fairly be expected to become self-supporting. The College has a great future before it, and there is every reason to anticipate that before it is many years in existence it will prove of incalculable service to the country at large, and let us hope it may prove fruitful in usefulness to the veterinary profession and agriculturists.

*The London School* (*R.V.C.*) in its earlier days had a grant of nearly £20,000 from the Government, whilst the Scotch Colleges (two of them being proprietary institutions) have never had a penny from Government, although Professor W. O. Williams has made an appeal to the powers that be, but without success. It is a pity but some satisfactory arrangement could be arrived at whereby the Scotch Schools could combine and thus concentrate their strength in one national college.

It is hard to think other departments of education have been made matters of national concern, whilst the veterinary teaching has been practically left to take care of itself. In proof of this the veterinary teaching institutions of the United Kingdom, with one exception, receive not one penny of national money.

Gentlemen, I feel that the length of my paper is already wearying you, for I had no idea when I selected my subject that I had such a gigantic field before me. I will content myself by briefly entering upon one or two topics of vital importance to veterinarians, for it has to be remembered that to a great degree the national wealth is due to the exertions of the veterinary practitioner to stem disease and restrict its ravages amongst the lower animals. Rinderpest, pleuro-pneumonia, sheep-pox, and rabies may be looked upon as diseases of the past, let us hope, as far as this country is concerned. As regards the last-mentioned disease, rabies, it appears probable that the year 1900 will ever remain memorable as the one in which this terrible disease was eradicated from Great Britain.

For the suppression of rabies in dogs the Board of Agriculture deserves great credit, and Mr. Walter Long in particular has distinguished himself by his judgment, pluck, and firmness in maintaining the muzzling order in face of the grossest misrepresentation and abuse, thereby abolishing a cause of death and intense suffering to both man and animals.

There is yet a great field of usefulness before the veterinary profession if we only simply confine ourselves to the stamping out of such diseases as glanders and farcy, anthrax, swine-fever, scab, tuberculosis, contagious abortion, and foot-and-mouth disease. The latter disease, after an absence of five years from 1895 to 1899, has unfortunately reappeared in this country in the early part of last year, but fortunately has not attained serious dimensions, and looks like being again stamped out ere long.

I should not like to close my remarks without briefly alluding to the great losses our profession has sustained in very recent years. The hand of death has been busy in removing from our midst some of our most prominent members, whose death leaves the veterinary profession appreciably poorer. I refer in particular to such men as Finlay Dun, George Fleming, and Professor Williams. Men of sterling worth, genial, kind-hearted, and held in the highest esteem by the whole profession. Men who have been devotedly attached to their calling, their personality will be long remem-

bered, and their worth and work will never be forgotten. We have also to mourn the loss of other equally valued members who, though perhaps not quite so conspicuous in some respects as those already mentioned, were nevertheless good men and true, who have left their impress for good upon the profession.

Perhaps I have said enough to indicate that the closing years of the old and the beginning of the new century have been a most eventful period in our history, and one which we can all look back upon with pride and satisfaction. It has witnessed a distinct advance in veterinary science and in the status and general equipment of its practitioners. It has seen a greater appreciation of our work not only in the highest quarters, but by the community. The profession has been raised in tone and social position, as it has improved in efficiency and knowledge.

Much, however, remains to be done before it can be said that our work is adequately recognised by the State, but I feel sure the achievements of late years encourage us to hope for better things, and will still further stimulate us in our efforts in the future, so that we in our own day and generation may do something to add to the usefulness, the prestige, and welfare of our calling.

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## NOTES ON INTERESTING CASES.[1]

BY A. PEELE, M.R.C.V.S., WEST HARTLEPOOL.

### FOREIGN BODY IN HORSE'S TONGUE.

*Case I.*—June 21st, 1889.—A cart horse was brought to me because he was off his food and slavered a good deal. Thinking his teeth might require attention I examined them but found nothing wrong with them; I noticed, however, that his tongue had a bluish colour and the base appeared swollen, especially on the left side. On manipulating this swelling I pricked my finger, and soon extracted a piece of wire about 2½ inches long. The direction it had taken was downwards and forwards.

*Case II.*—May 18th, 1891.—I was called out of bed in the morning to see a bay mare at N.E.R. Co. stables. I found the mare looking dull, would not eat, saliva dribbling from her mouth. On examining with assistance of the gag I discovered a hard elongated swelling on the left side of the tongue, which was very painful. Suspecting a foreign body I examined this swelling carefully, and felt something deeply embedded in the tongue. I pressed on it from above towards the tip of the tongue, and forced through a piece of wire two inches long.

*Case III.*—October 18th, 1891.—I was requested to attend a cart horse at a farm; the message was simply that the horse was off his food. I found the horse dull, shivering, and slavering; he had eaten a feed of corn early in the morning. I examined his mouth, and found the tongue swollen and a bluish tint. On passing my hand along the left side I pricked my finger, and then extracted an old darning needle with the point bent and the eye broken, on account of which no doubt it had been thrown away. The needle had gone in eye first, and was directed downwards and forwards towards the tip of the tongue.

[1] Read at a meeting of the South Durham and North Yorkshire Veterinary Medical Association held at Darlington on 6th December 1901.

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These cases indicate the importance of carefully examining the mouth where our attention is called to an animal slavering and off his food. One is apt to think the symptoms point to some glandular mischief or sore throat, as the subject in all these cases presented symptoms of general disturbance. Particularly was this so in the last case, where the horse had a rigor when I saw him. One also notices that in the cases mentioned the foreign body was on the left side of the tongue and was directed from behind downwards towards the lip; this probably is only a coincidence.

### Strongylus Tetracanthus.

*Case IV.*—January 1892.—In attendance at Castle Eden Colliery I was requested to examine a rising three-year-old pony. He had been turned out with other young ponies bought in the previous summer. The horse-keeper noticed him amiss in the field, so brought him into a loose-box. I found him to be dull, little or no appetite, disinclined to get up and move, which he did stiffly, pulse small and quick, temperature 102°, diarrhœa, sheath swollen, and before he died, which was a few days after my first seeing him, there was some œdema about his head. I was certainly at a loss to account for illness and death, so made a post-mortem. On removing skin I found a considerable amount of effusion under neck, sternum, and abdomen, which was not apparent during life owing to heavy coat. *Lungs* in their lower portion seemed denser than normal and somewhat congested. *Heart* contained slightly coagulated dark blood, tissue pale. *Liver* easily broken up. *Kidneys* œdematous, easily broken up, and very pale. *Bowels*, mesentery, and glands thickened and enlarged, of a tawny colour. The outside of colon was studded with round dark spots about the size of a sixpence and smaller. The mucous membrane of large colon much thickened, very irregular on its surface, and studded with red points. Strongylus armatus and S. tetracanthus were found in the lumen of the bowel, the latter predominating. On opening the nodules in the coats of the bowels you found the small bright red worm, S. tetracanthus. One or two other ponies do not appear to be doing well, so ordered them liberal diet and rock salt to be placed in the troughs. I was rather astonished after making the post-mortem examination that the pony had not sooner shown signs of disease, also that he did not show any marked abdominal pain. The parasites appear to cause no discomfort until they make their way into the lumen of the bowel, for there was every appearance of disease of some time standing in the mesentery, around the mucous vessels and glands, also well-organised bands of lymph on the peritoneum. With regard to life history of Strongylus tetracanthus, I believe winter is the time they come into lumen of bowels, as shown in the horse I ride; he has always fallen off during the winter, and we find worms in fæces.

### Tumour in Right Ventricle of Brain of Mare.

*Case V.*—December 24th, 1887.—My principal and I went, at 6 A.M., to see a cart mare about fourteen to sixteen years old. The mare was left all right on the previous night, and this morning was found down and unable to rise. Before our arrival attempts had been made to get her up, but to no purpose. Symptoms were—breathing somewhat accelerated, pulse full, strong, and about 40; temperature normal, pupils dilated, general want of power, takes no notice of pricking with a pin in any part of

the body, sometimes struggles, using fore and hind limbs alike. Diagnosis was some brain mischief, possibly a tumour. Prognosis was unfavourable. She got steadily worse, and at eight P.M. we advised owner to have her destroyed, which was done at eleven P.M.

*Post-mortem.*—In the right lateral ventricle of the brain in connection with the choroid plexus there was a tumour the size of a large hen's egg. Externally the tumour was very like brain tissue : on section had a mottled appearance. Vessels of pia mater were well mapped out, and on cutting the brain substance puncta vasculosa well marked. We afterwards found out that this mare had had previous attacks of compression of the brain, as shown by unsteady gait, blindness, &c., which passed off after physic, blistering poll, &c. Had we known her history prior to this last attack we might have made a more exact diagnosis.

### URETHRAL CALCULUS IN A BULLOCK.

*Case VI.*—October 13th, 1901.—I was sent for in the evening to attend a fat bullock ; the animal was being prepared for Christmas show. Cattleman said he had not seen the bullock urinate since three P.M. on the previous day, and he had watched him carefully. The bullock was lying down when I arrived, and disinclined to rise. However, with a little persuasion, he did so. He looked dull, temperature 101°, respirations increased in frequency, now and then whisked his tail, and man said he had been straining as if to defæcate, bowels had acted. Had given him ol. lini., ol. terebinth ℥i. and pot. nit. ℥i. I examined per rectum, and found bladder distended ; he strained a little during examination. I could detect no obstruction in the course of urethra as far as I was able to examine it in so fat a subject. I gave him an enema, and left instructions that he must be closely watched, and if he showed worse symptoms he had to be slaughtered, which had to be done at nine A.M. on the following day just before my arrival.

*Post-mortem.*—Bladder distended with urine, mucous membrane much inflamed, and in one patch nearly black. In the urethra, about the first bend of penis, I found a calculus as big as a good-sized pea. He made a grand carcase of about 90 stones. In this case the symptoms were not so urgent as one might have expected them to have been, which led me to run the risk I did of losing the beast by postponing slaughter. I am sorry I cannot show calculus, which evidently was of a soft nature, and has since crumbled to dust in a chip box. This suggested to me feasibility of crushing in urethra a calculus if located in a similar case.

### OBSTRUCTION OF BOWELS CAUSED BY TUMOUR.

*Case VII.*—September 30th, 1888.—Called at 6.30 A.M. to attend half-bred mare. She was in usual condition and apparently healthy on previous night ; found this morning showing abdominal pain, straining, much swollen around anus and vulva. When I saw her she had dull pain, anxious look, pulse frequent and small, mucous membrane rather pallid, breathing frequent and deep, tympanitis of the bowels, and at intervals severe straining fits. I notice on examining per rectum the bowel appears to become constricted as my hand passes forward. Treatment consisted in giving aloes Barb. ℥vi., tr. opii, and chlorodyne, and enemata. The mare gradually sank, showing neither violent pain, nor did she strain so much. Tympanitis

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increased, urinated freely, passed flatus and a little fæces which had a bad odour and was a peculiar shape and small, something like what a dog would make. I formed the opinion that there was obstruction of the bowels close to the rectum.

*Post-mortem* examination found an immense tumour in the sublumbar region, to which bowels were attached in parts, and the kidneys were in close connection at superior part; they had to be carefully dissected away, and were very pallid. The tumour weighed about 20 lbs., had a thick fibrous coat. At the superior part where it was attached to sublumbar region there was an irregular bony mass. The lowest portion of tumour was very prominent, and fluctuated on pressure. On section I found the greater part consisted of a meshwork of fibrous tissue enclosing fat; here and there were blood-clots; the lowest portion contained a quart of bloody serum. I think the reason why the tumour suddenly caused obstruction was that a vessel ruptured in the tumour, causing enlargement. The owner had had mare about three years, and she had never ailed during that time. I think I ought to have detected tumour in making examination per rectum.

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## CLINICAL NOTES ON CASES OF AZOTURIA, HÆMOGLOBINURIA AND ACORN POISONING.[1]

BY E. J. THORBURN, M.R.C.V.S., OKEHAMPTON.

### AZOTURIA.

THIS disease is one which I think the majority of us feel glad is not of common occurrence, at any rate not in a country practice. Seen in both sexes, as frequently in one as in the other, though at one time looked upon as being a disease peculiar to the mare and associated with the period of œstrum.

*Cause.*—What causes the disease? Now this is one especial point I hope we shall hear all the members present who have had practical experience of the ailment give an opinion on, and the reason for that opinion. I confess I find it very difficult to arrive at one. Referring to "Williams' Medicine" on the subject, I find it stated that the disease is only seen after a period of rest and when the animals are being fed on highly nitrogenous food. Well, this is not in accord with some cases which have occurred in my practice. In three cases, two of which were in geldings and one in the mare, there had been no period of rest whatever, nor had the feeding been in any way altered from what they had been receiving for months. These horses were ordinary farm animals doing ordinary farm work. Two cases occurred on Saturdays, and the peculiar thing about them was that the animals were owned by two neighbouring farmers, and that the cases occurred within, as near as possible, a twelvemonth of each other. As I have said, there was no rest, the animals were at work each day, were turned out at night, in fact there was not the slightest change in management which would at all account for the onset of the disease. Of course this may not be anything fresh to some of my listeners, and I am looking forward to hear if their experience has been

[1] Read at a meeting of the Western Counties Veterinary Medical Association at Exeter on 5th December 1901.

similar to mine, but to me the cases were very extraordinary in occurring as they did.

*Symptoms.*—We will now touch on the symptoms, and here again my experience does not altogether agree with those set forth in the text-books. I mean in the way they are developed. We are told the animal generally comes out of the stable much more excitable than usual, that he or she goes all right for a mile or so, then suddenly loses control of the hind extremities, staggers, and often comes to ground. These of course are the symptoms noticed in the majority of cases; but, again referring to the two farm horses, different symptoms were noticed. Taking the case of the mare, the attendant to this animal told me the first thing he noticed was that he caught the mare in the field in the morning without any trouble. This fact caused him surprise, always before she had been most difficult to catch. On haltering and leading her away the man noticed she moved stiffly, this he pointed out to his master, who, however, ordered the mare to be shod and sent on her journey. This was done. The stiffness became gradually worse, and there was knuckling over the hind fetlocks. After accomplishing 10 miles of the journey the man saw the mare could not go any further; he accordingly let her out; she was taken to a neighbouring farm, put into a stall, and I was sent for.

The symptoms shown on my arrival were those of an acute attack of azoturia; the mare was lying on her side, the muscles over the quarters were rigid, breathing much accelerated, profuse sweating, pulse 102, temp. 104°, and total inability to rise. Attempts were made to raise the mare by means of slings, but without success; she sat like a dog for hours with the fore feet between the hind legs. When lying on her side the urine was frequently ejected in efforts, and was of a very dark colour. The mare died in great agony twenty-eight hours after I first saw her.

The other case occurred in a gelding six years old; this horse had not been rested, but worked every day. On the Friday he went a journey of 12 miles drawing coal, the day following he was put into a waggon with another horse, and started to go a journey of 10 miles. The driver noticed soon after starting that the horse appeared to be moving stiffly; he, however, accomplished his journey one way without apparently getting any worse; here the waggon was unloaded and reloaded, the horses meanwhile were not taken out of the shafts, and had nosebags on while waiting. Eight miles of the homeward journey had been travelled when the driver noticed the horse getting much worse, continually knuckling over, and leaning against the shaft and sweating a great deal. The man pulled up and let him out of the waggon; he staggered and fell; he was got up again and walked, but with great difficulty, for about half a mile, when he again went down and was unable to rise. I was sent for, we were unable to raise him, all power was gone from the hind extremities. I passed the catheter and drew off urine, which was quite brown. The horse died within a few hours.

What I wanted to particularly draw attention to in these cases is:—

(1.) That the feeding in both instances had not been recently changed in any way.

(2.) There was no period of rest preceding these attacks, and

(3.) The distance each horse travelled before acute symptoms were developed—in the one instacce 10 miles, and in the other 18 miles. Of course it may be suggested that had the horses been travelling at a faster rate the symptoms would have been more quickly developed. That is possible.

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*Treatment.*—I am touching the treatment of this disease for a certain reason. The first thing every one does when called upon this ailment is, I suppose, to administer a full dose of aloes. A little incident occurs to me which happened whilst I had the charge of a practice at Finchley, N. London. I was there called upon to treat a horse seized with an attack close to where I was living. I gave a ℥vj. physic ball: about ten to twelve hours after the owner's own veterinary surgeon arrived, and he thought it would be advisable to give *another* six drachms: I told him he could do so if he wished but it must be on his own responsibility. Now in the treatment of this disease, my experience has led me to be very much more careful in prescribing aloes than I used to be, for I am quite certain that in one case it caused the death of the animal. This was a very nice chestnut (dark) cob about fifteen hands, five years of age; he had been taken up from grass about three weeks and put on dry feeding. When I was called he was down, the hind limbs quite stiff. I drew of the urine, which was the usual colour in this disease, flexed his hind limbs and continued working them for about five minutes; we then got the cob up. I gave a ℥v. dose of aloes, following this up with stimulants; in the evening the cob was able to walk round the box, and next morning could do so quite well, showing no weakness; all hardness had gone from the muscles. The physic commenced its action twenty-six hours after administration, but instead of pursuing the usual course, superpurgation ensued, attended with fatal results. I am quite sure if no aloes had been given the case would have recovered, for I never saw one go on so well for the first twenty-four hours. I have been very careful about using aloes since. Three cases I have since treated in the same stable, two attacks being in one horse; in neither of these cases did I use aloes, but gave salines and stimulants, the result in each case being a perfect recovery.

### Hæmoglobinuria,

Commonly called red or black water, occurs in cattle of all ages and occasionally in sheep.

Although I am aware that this Society has recently had read before it a paper on this disease, I am venturing to introduce it at this meeting. firstly, because much to my regret I was unable to be present at the reading, which I may say was a very keen disappointment to me; and secondly, for some reason or other, the paper was never published in *The Veterinary Record*, so that members who were not present at that meeting were deprived of the benefit of reading what was said about the disease. Mr. Youngs will, I hope, forgive me for introducing the subject now, but I am very much interested in the disease, as I am called upon to treat a great number of cases every year.

This disease, as you are aware, is seen in cattle grazing on poor lands, moors, or marshes, and occurs in the spring, summer, and autumn seasons; at least this is the general rule. This year I have had three cases occur where the circumstances were rather different; these occurred in in-calf cows which had been kept for some considerable time on moors; they had been brought from these moors and turned into two good meadows; these meadows had been in the same owner's occupation for thirty years, and though he had kept cattle there constantly during that time he had never before known a case of the sort to occur there. These cases recovered under the usual treatment; the only reason I mention them is to point out—

1. These animals were transferred from poor pastures to good meadows, under which circumstances we don't at all expect to have a case occur.

2. That for thirty years, though cattle had continually been placed on these meadows, the disease had not during all that time occurred.

A case of this disease happened a few weeks ago which, as it showed some peculiar symptoms, I will describe somewhat in detail. It occurred at a farm on which several cases happen every year. The cow had calved about three weeks when she was noticed to be affected.

The symptoms were loss of appetite, urine black, watery diarrhœa, milk quite pink. The animal had been in the owner's possession about six months. He told me the fæces had always been much thinner than in other cows, though on the same diet. I told him the cow was probably tuberculous, and that he must make up his mind for a fatal issue.

I treated this cow for three days, sustaining her strength with linseed gruel, eggs, and milk. On the third day she could scarcely stand, and when we attempted to drench her, fell down utterly exhausted. On visiting later in the day I found her stretched out on her side in a comatose condition, symptoms exactly resembling milk fever when it reaches the unconscious stage—stertorous breathing, eyes amaurotic, mouth open and tongue hanging out, which did not move when touched; the power of swallowing quite gone, so that we were unable to drench at all as I had not brought a probang. I told the owner nothing further could be done, and the animal was left to her fate.

Now here comes the extraordinary part of the case. The following morning I was sent for, as the cow was still lying. When I arrived my surprise was great to see her lying on her sternum quite conscious; she drank a bucket two-thirds full of water, but would not eat anything. I gave her a stimulant consisting of spt. æth. nit. and spt. ammon. ar. *aà* ℥ij. in gruel. She then rose and without difficulty walked several yards; the urine which she then passed was only slightly tinged with red, but the diarrhœa was just the same, and the tail was not elevated during the expulsion of the fæces. She continued in this state for two days, being kept alive with gruels and stimulants; there was no appetite whatever; she died at the end of the second day. Most unfortunately I was unable to make a post-mortem; I feel sure that if I had tubercular lesions would have been revealed.

The special points of interest in this case were—(1) The state of coma so much resembling a milk fever case; (2) the recovery from that state.

*Treatment.*—As I haven't alluded much to the treatment of the above cases, perhaps it would not be out of place to generalise the treatment of this disease. In all cases the first thing to be done is to remove the animals from the place where they became affected, and either put them on to different fields or house them. On the time of year depends whether they should remain out at night if transferred to different fields.

*Medicinal.*—Give a bold purgative. In many cases this is all that is required, but where the animal has no appetite linseed gruels must be given three or four times a day. Quinine and nux vomica are very useful drugs in cases where there is loss of appetite.

### ACORN POISONING.

The last disease that I shall touch upon is one which has been of very

frequent occurrence this autumn, and that is acorn poisoning in cattle. The literature on this disease seems to be conspicuous by its absence, for on referring to Williams' works I find no mention of it whatever, though why such an important subject should have been left out seems difficult to understand.

This year I have been called upon to treat a great number of cases, and I daresay there are others present who have also, at least I hope so, as I am anxious to hear their experience and the treatment they found to be most successful.

Up to a certain point cattle seem to do very well when eating acorns, and improve very much in condition, and it is only when we have years like the present, when acorns are exceedingly plentiful, that cases of poisoning are heard of in connection with them. Until this autumn I don't remember having seen a case for several years.

*Symptoms.*—The symptoms which have been constant in the cases I have seen this year are loss of appetite, grunting, disinclination to move, great prostration, icy coldness of extremities, very rapid emaciation (this symptom is particularly noticeable), pulse very small and weak, in some cases almost imperceptible; temperature high, 105 to 107°; constipation succeeded by very watery diarrhœa.

*Treatment.*—The first thing to be aimed at in this disease is to eliminate the cause from the system as quickly as possible, and for this end a purgative should be at once administered, followed by stimulants and digestive tonics. The strength must be maintained by gruels consisting of boiled linseed, to which add eggs and milk. House the patient and clothe.

One case I will describe occurred in a cow; all the above symptoms were present in a very aggravated form; the temperature for four days stood at 107°, and, as you may imagine, loss in condition was very rapid. On the fifth day she was reeling about, and when down could not rise without assistance. This animal was three weeks under treatment, and during all that time ate absolutely nothing. After that she commenced slowly to improve, would eat a little hay or mangold. She was turned out for a few hours every day and would feed fairly well on grass. Up till last week I had not seen her for a fortnight, when I was sent for to see another case. I asked how the old patient was progressing and was told she was feeding fairly well, especially on grass, but didn't improve much in condition. I saw her, and on looking in the manger I saw pellets of food which had been brought from the rumen to the mouth for rumination, but which had instead been dropped into the manger, all power of performing that function seemed to have gone. I gave her nux vomica ℥ij., gentian ℥ss., and cinchona ℥vj. twice daily, and am glad to say she is now going on satisfactorily and has commenced "chewing her cud."

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## A FEW NOTES ON REDWATER.

BY W. S. LAMONT, M.R.C.V.S., COOKSTOWN.

REDWATER is a common disease in this district, but unfortunately the veterinary surgeon is rarely called in until the later stages of the disease, or unless some complication sets in.

However, I had the opportunity last season of seeing some cases in the

early stages and watching the course of the disease under treatment. I kept notes of a few cases which were interesting, because the usual conditions supposed to cause the disease were absent, and the owners did not remember ever having a case of the disease before; also the interval was nearly similar before the second cow was attacked on each farm.

*Case I.*—September 22, 1901.—A white shorthorn cow in milk, the property of Mr. P. had been milking well. He noticed her purging the day before, and she gave less than half the usual quantity of milk.

*Symptoms.*—Appetite *nil*, rumination suspended, bowels constipated, respiration and pulse accelerated, but not counted; temperature 105·4° F.; little milk in the udder, and slightly coloured; urine thicker looking than normal, and porter colour.

*Treatment.*— ℞ Mag. sulph. ℥xx.
Aloes barb. ℥i.
Nucis vom. pulv. ℥iv.
Pulv. zinziberis, ℥i.

ft. pulv.

To be melted in a sufficiency of thin sweetened gruel, and given at once as a drench.

℞ Quinine sulph. ℥i.
Ac sulph. dil. ℥i.
Aqua ad. ℥i.

ft. mist.

One-fourth of bottle every six hours in gruel as a drench; first dose dose to be given along with above.

As much bran tea as she would drink, no fodder, and a warm cover to body.

September 23rd.—*Symptoms.*—Physic had operated, had taken some bran; temperature 104° F.; respiration and pulse not so fast; milk no change, urine no change; seemed anxious for fodder, so ordered hay in small quantities until they saw her chewing the cud.

*Treatment.*—Quinine mixture as before.

September 24th.—*Symptoms.*—Cow feeding and ruminating; temperature 102° F.; respiration and pulse normal; had given 4 quarts of milk; colour all right, urine port wine colour.

*Treatment.—Nil.*

September 25th.—Cow doing well; temperature 100·2°.

*Case II.*—October 5th.—Roan half-bred cow, within two months of her note, the property of Mr. P.; noticed her purging, and watched for urine; found it coloured, so sent at once.

*Symptoms.*—Cow feeding and ruminating, but purging; urine the colour of porter; temperature 106° F.; respiration and pulse slightly faster than normal.

*Treatment.*—Quinine mixture as before, with plenty of bran tea and gruel.

October 6th.—Cow much the same; bowels slightly constipated; temperature 104° F.

*Treatment.*—Quinine mixture as before; ol. lini. ℥i. as a drench.

October 7th.—Temperature 102° F.; urine port wine colour; cow otherwise in good health.

*Treatment.*—Advised no more medicine on account of the cow being in calf.

October 8th.—Mr. P. called in the evening to say that the urine was as dark as ever. Found temperature 104° F., and cow with a slight rigor.

*Treatment.*—Quinine mixture, and warm cover.

October 9th.—Temperature 104° F.; urine porter colour ; health otherwise good.

*Treatment.*—Quinine mixture.

October 10th.—Temperature 101½° F.; urine light port wine colour.

*Treatment.*—Half doses of quinine mixture.

October 11th.—Cow all right.

*Case III.*—October 19th.—Half-bred cow in milk, the property of Mr. G. ; noticed the urine coloured, and as some cows had died in the neighbourhood, sent at once.

*Symptoms.*—Cow seemed all right except for purging ; had failed 6 quarts at last milking ; temperature 105° F.; urine porter colour.

*Treatment.*—Quinine mixture as given to Mr. P.'s cows, but gave half of bottle night and morning.

October 20th.—Cow still looking well and feeding ; temperature 103½ ; urine lighter in colour.

*Treatment.*—Quinine mixture.

October 21st.—Temperature 101½ ; urine port wine colour.

*Treatment.*—Quinine mixture in half doses, as I did not want a relapse.

October 22nd.—Cow all right.

*Case IV.*—October 30th.—Shorthorn cow in milk, the property of Mr. G.; noticed her failed in her milk, but was not sure whether urine was coloured or not, as she purged at same time.

*Symptoms.*—Cow purging, but feeding ; temperature 104° ; urine dark port wine colour.

*Treatment.*—Gave quinine mixture at one dose.

October 31.—Temperature 102° ; urine darker in colour.

*Treatment.*—Gave half of quinine mixture.

November 1st.—Cow all right.

These cases strengthen my belief that redwater is a blood disease due to an organism, prove the efficacy of the quinine treatment, and show that there is no necessity for purgatives if you get the cases early enough.

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## Legal News.

### A CASE OF ANTHRAX—REPORT BY PROFESSOR JAMES M'CALL.

(From *Glasgow Herald*, January 8th, 1902.)

At the Central Police Court yesterday—Bailie M'Cutcheon on the bench—James M'Aulay, farmer, of Hairmyres, East Kilbride, was charged, under the Anthrax Order of 1899, with having on 4th or 5th December removed from his farm to the Moore Street Slaughter-House the carcase of a cow which had been affected by anthrax. Professor M'Call, a witness for the prosecution, stated that he had inoculated with blood of the spleen taken from the cow a dog and two rabbits, all of which died. It was explained

for the defence that the accused was not aware that the animal was suffering from anthrax. He thought it was affected with a stomach complaint, and it was while giving the cow a specially prepared drink to afford it relief in this respect that it died. Thinking the animal had been choked by the preparation, he cut its throat and sent it into the market. The Magistrate found the charge proved, and, referring to the importance of the case, said he thought it proper to say in the interest of the accused that accused did not know the animal was affected with anthrax. It had, however, been affected by a disease from which it had died rather suddenly, and surely that should have made accused more cautious in removing the cow without having taken medical advice on the subject. In view of the fact that this was the first case of the kind in Glasgow he would limit the penalty to a fine of £5.

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The following report on this case has been presented by Professor M'Call to the Executive Committee of the Local Authority of Glasgow :—

I regret to have to report another outbreak of anthrax. On the 5th December I was again informed by the Meat Inspector at Moore Street Slaughter-House that he had detained the carcase of a cow on suspicion of being affected with "anthrax." The animal belonged to Mr. James M'Aulay, Hairmyres, East Kilbride, and was consigned to E. Mather, Dead Meat Market, Glasgow, and, except that it had been bled, the body was submitted as at the time of its death. As in the former case, a portion of the spleen, lymph-glands, &c. were removed to the College, and on preparation and examination with the microscope the "bacilli of anthrax" were discovered. As I had no intimation from the Meat Inspector that he would follow up this case, I determined to do so, and accordingly, on the 6th ult., I drove out to Hairmyres. In passing through East Kilbride, I called on Mr. Begg, the veterinary surgeon of the district, and, in course of conversation, elicited from him that he knew of the removal of the carcase of the cow to Glasgow, but that he had not seen the animal in life, nor prescribed for her. I asked Mr. Begg to accompany me, which he did. On my arrival at Hairmyres I found Mr. M'Aulay in the act of starting for Glasgow to ascertain what had been done with the carcase. Mr. M'Aulay very frankly detailed the whole circumstances connected with the death of the cow. These may be briefly summed up as follows :—The cow had been in his possession for about four yerrs, and was always a healthy one. On the day she died she was fed as usual at twelve noon, but did not consume all her turnips. At four in the afternoon she was found down in her stall, and would not rise. Mr. M'Aulay was from home that day, but, on his return at five o'clock in the evening he was informed that the cow was unwell, and he went direct to the byre. He tried to get her up, but she would not. He then administered some medicine from a bottle, which she drank, but on trying to give her another bottle she died in his hands. He thought that he might have choked her. In about 10 minutes thereafter he bled her, and immediately thereafter he went down to East Kilbride and despatched a message to Mr. Henderson, Glasgow, to send out a barrow to take the carcase into the Moore Street Slaughterhouse, which he did. From the candid way in which Mr. M'Aulay, in the presence of Mr. Begg and myself, made this statement, I am convinced that he did not know that his animal was affected with "anthrax," but still that would not, in my opinion, justify his

conduct. By section 17 of the Anthrax Order of 1899 it is enacted as follows:—"Where the owner or person in charge of an animal is charged with an offence against the Act of 1894 relative to 'anthrax,' he shall be presumed to have known of the existence of that disease, unless and until he shows to the satisfaction of the Court that he had no knowledge thereof, and could not, with reasonable diligence, have obtained that knowledge." As the history of this case may also have left an impression on the mind of those interested that possibly after all it was not a case of anthrax, on my return to Glasgow I arranged with my assistant for the inoculation of two rabbits and one dog with blood from the spleen of a cow. The operations were performed in succession at 8.30 P.M. the same evening. The larger rabbit received 60 min., the smaller rabbit 30 min., and the dog 2 min. hypodermically. The rabbits were feeding well and the dog greedily before the operation. Towards the afternoon of the following day (Saturday) the dog had a haggard look, at short intervals well-marked rigors followed each other, and he refused to eat. One of the rabbits appeared dull, but the other appeared all right. On Sunday morning, at seven o'clock, the dog died. The smaller rabbit died an hour later than the dog, and the larger rabbit six hours later than the smaller; and a microscopical examination has demonstrated the presence of anthrax bacilli in the blood of the spleen of the rabbits, and in the blood of the liver of the dog. From what I can gather, it seems to be the opinion of stock proprietors in and around Glasgow that if they forward the carcase of an animal to the Dead Meat Market which has been bled, but the body unopened, that they have done all that is required of them, and that this holds good even in those cases where the animal has died before being bled. I do not know upon what grounds this belief rests, but I consider it to be contrary to law and the safety of the public, and in the case under consideration I feel justified in advising the Local Authority to take legal proceedings against Mr. M'Aulay. In conclusion, I desire to say that it is not my intention for the future to continue the transmission of the "anthrax bacilli" to other animals, as it is, in my opinion, a cruel and unnecessary sacrifice of animal life; but under the circumstances detailed what I have done will, I hope, to some extent justify the course I have pursued.

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# Extracts.

## CLINICAL OBSERVATIONS ON ROARING.

BY W. L. WILLIAMS, PROFESSOR OF SURGERY, NEW YORK STATE VETERINARY COLLEGE.

In the *Review* for July 1900 (Vol. XXIV., p. 240) Doctor Liautard presents a brief *résumé* of discussions upon the question of the heredity of roaring by such eminent scientists as Nocard, Lavalard, Cagny, Barrier, and Labat. The latter of these clings to the belief in a hereditary predisposition. Much confusion has been caused by including under the term "roaring" all cases of disease resulting in a loud roaring noise during exertion, a heterogeneous collection of maladies of the greatest possible variety and scarcely related in any way.

For our purposes we shall restrict the term to the predominant patho-

logic condition causing this symptom, consisting of paralysis and atrophy of the muscles supplied by the left recurrent laryngeal nerve, and which upon investigation show no sufficient cause for the paralysis, such as the pressure of a tumour on the nerve or the separation of the nerve, owing to a traumatism.

In the article above quoted the query is put "Why should 'Ormonde,' himself a roarer, produce roarers when in England, and when taken to America *not have one* roarer to his credit?" Other cases of confirmed roarers used as breeders without producing roarers are cited. The query concerning "Ormonde" is significant. Why did his British progeny "inherit" his defect and his American produce remain free? If we admit "heredity" as the ruling factor we should have to conclude that there was a hereditary predisposition in the American mares against roaring which was greater than "Ormonde's" pro-roaring tendencies. But the American mares were probably from British stock in which roaring has been common throughout history, and the question arises then whether the mares in South America had acquired an immunity against the malady.

This at once raises the question of climatic influence on roaring, and unfortunately we have no statistics at hand to affirm or deny such suggestion. In the writer's observations, however, climate does seem to exert a powerful influence, though no exact data have been preserved. During twelve years' practice in central Illinois, in an agricultural region largely devoted to horse breeding and chiefly to heavy draft horses, roaring was rarely seen, probably one case a year was presented. In Montana, in a location where there were a great many horses, three roarers can be recalled during a period of as many years. At the free clinic of the New York State Veterinary College, 25 roarers have been presented among 3500 surgical patients.

The figures are suggestive, but may be faulty. If true, they argue against heredity, for, so far as the writer can judge, the belief is heredity and the care exercised to prevent transmission is most evident where the disease is most prevalent.

If heredity is the prevailing factor in producing roaring, it would seem it should appear often at birth, and the frequency of advent should decline with age, but not wholly cease, but in practice we see it occur between three and six years, and rarely outside this range.

Heredity should not, it seems to us, have any great preference for one sex as against another in case of a disease affecting an organ having comparatively slight sexual attributes, or if the sexuality has much to do with the heredity then the desexualization should act as a barrier against the disease. The 25 cases entered in our clinic were as follows: Geldings, 17; mares, 5; stallions, 3.

| | Number of cases which would result if all sexes were equally susceptible. | Actual number of cases occurring. | Ratio of cases occurring to an equal occurrence without relation to sex. |
|---|---|---|---|
| 6000 mares. | 15 | 5 | 1·3 |
| 3950 geldings. | 9·875 | 17 | 2·1 |
| 50 stallions. | ·125 | 3 | 24·1 |
| | 25 | 25 | |

The proportion of stallions, mares, and geldings per 1000 in this community can only be estimated, and the following would, perhaps, be approximately correct: Mares, 600; geldings, 395; stallions, 5.

If we assume for the purposes of study that our 25 cases would exist among 10,000 horses, then the following table would show the inequality of vulnerability to roaring as influenced by sex:

These very brief data may be quite misleading, but they are in our judgment in accord with our prior observations where no statistics were preserved, unless that the ratio of stallions affected is too low.

If roaring is hereditary, environment should play little, if any part, in determining the absence or presence of a disease, but in our observations *we have never seen roaring in an unhoused horse.* This is interesting in conjunction with the data above given as to sex. Stallions are, as a rule, constantly stabled. Geldings are used for work purposes only, and are largely sold into cities and quite constantly stabled, while a large proportion of mares are kept on farms and are more largely allowed the freedom of the pasture.

These, to us, are the chief arguments against the heredity of roaring, while probably the chief, if not the only weighty evidence for heredity, is the frequent occurrence of roaring among the progeny of affected parents, but if climate and housing exert a distinct influence upon its cause or prevention, then it must largely destroy the value of this fact as a proof of heredity. If given climate, food, housing or other environment causes or prevents roaring, then if these conditions be present roaring naturally ensues if parents be roarers, and equally so if they are not roarers, and the strongest suggestion of the probable advent of roaring in a young horse would be that his sire or dam contracted the disease under the same conditions in which he is placed.

The question needs careful study. In horse shows stallions which roar are excluded from competition, but their progeny, shown without their sire, are eligible! If the disease is hereditary the action is hypocritical, if not hereditary much injury is done by damaging the repute of excellent sires.

(*American Veterinary Review*, January 1902.)

It is a well-known fact that roarers from England often beget healthy stock in the United States and Canada. EDITOR *V.J.*

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## MANGE, SCAB, BRANDZIEKTE, OR ACARIASIS.

As a large number of horses in Cape Colony are now suffering from mange, the following article by the Colonial Veterinary Surgeon is published for general information:—

This is a disease of the skin which is due to the irritation produced by certain little mites, called acari. There are three species of these acari which infest the horse: (*a*) *Sarcoptes equi*, which burrows under the epidermis, and affects the horse principally about the head, neck, and forequarters, but may spread all over the body. The form of scab produced by this species of acarus is characterised by a more or less wrinkled condition of the skin, in addition to the ordinary scurfy appearance, and constant itching. It is of some importance to know that this species of scab insect is

readily conveyed from calves and common goats to horses, and even to man, and *vice versa*. (*b*.) The second species of scab insect is called the *Dermatodectes equi*, or *Psoroptes equi*. This acarus pricks the skin, but does not burrow, it lives amongst the scabs and about the roots of the hair, and being much larger than the other species is easily discovered. It causes more itching than the sarcoptic species, but the scab produced is drier, has not such a deep crust, and there is not such a wrinkled condition of the skin, as in that other variety. (*c*.) The third species of scab acarus which infests the horse is called the *Symbiotes equi*, or *Dermotophagus equi*. This acarus affects the heels and legs of horses more particularly; it bites the skin but does not burrow, it congregates in large numbers in the epidermis, however, but does not wander about so much as the second species does. It is this species which produces the common scab of the angora goat.

*Symptoms*.—The common symptoms of mange are incessant itching and scratching; the skin becomes scurfy and partially denuded of hair, and may present in addition eruptions of small pimples, or abrasions of the skin from the constant scratching. In the sarcoptic variety, as already stated, there is generally a wrinkled condition of the skin, especially about the neck, and a moist, serous exudation in the grooves of the wrinkles. In the symbiotic variety, which affects the legs, the horse is repeatedly stamping with his feet, and rubbing one leg with the opposite foot until the legs become quite raw. If you scratch a mangy horse on the affected parts he will lean towards you and move his lips and teeth very much as if he was doing the scratching himself.

*Treatment*.—This consists in destroying the acari, and restoring the skin to its original healthy condition. This is easily enough accomplished, providing that the dressing is thoroughly done. Partial dressing is rarely effective; a mangy animal should be dressed all over if you wish to avoid disappointment. Care must be exercised, however, in dressing a horse all over with any of the carbolic dips, not to use them too strong, as it is a curious fact that a 5 per cent. solution of carbolic acid which may be used with perfect safety on a horse over the half of his body, may produce fatal results when applied over the whole body. A dressing of carbolic acid and oil, which is a most efficient remedy for mange in the horse, should not be used stronger than one carbolic acid to thirty of oil, when it is applied freely over the whole body. Before coming to this Colony I cleared a stud of seventy omnibus horses by three dressings, without losing a day's work with one of them. The plan adopted was as follows:—each horse as he came in from his work was cleaned in the ordinary manner, and immediately after he was thoroughly dressed from nose to tail, and from back to hoofs with horse oil (melted horse's fat), which is a splendid lubricant. There was nothing added, only he was saturated with it. The following day before each horse went out, this oil was washed off thoroughly by a mixture consisting of soft soap 1 pound, bicarbonate of potash 1 ounce, and crude carbolic acid 1 ounce. This mixture was made into a creamy emulsion with hot water, and rubbed well on to the skin of the horse all over, thoroughly incorporating it with the oily dressing, and then washing the whole off with an abundant supply of clean, warm water. The horse was then scraped, rubbed down, and sent out to his work, his harness being cleaned at the same time. Three dressings were repeated in this manner, at intervals of three days, after which the stables were lime-

washed and disinfected, and all utensils treated similarly, and no further trouble was experienced with the disease, although it had been in that stud for over two years previously.

In treating scab or mange, whether it be in horses, cattle, sheep, goats, or dogs, the primary consideration is thoroughness, and the repetition of the dressing within a week or ten days, as none of the dressings that I am acquainted with kills the eggs. An oily dressing acts best on the horse, because it sticks on better than a watery solution, and it lubricates the skin, which is much wanted. Crude castor oil or whale oil, mixed with sulphur, carbolic acid, Jeyes' fluid, or similar well-known parasiticides act very well. Paraffine and oil, one of paraffine to two of oil, acts very well also. Tobacco decoction, 1 pound in 5 gallons of water, and freely applied, or the principal sheep dips used as directed. The horse should, however, get a thorough good washing with soft soap, and a little bicarbonate of potash between each dressing, and all harness, cloths, brushes, &c., thoroughly cleaned.

Horses often suffer from great irritation of the skin, when they are kept close to fowl-houses or poultry yards, from the chicken *acarus—Dermanyssus gallinæ*—passing on to them.

*Treatment.*—Remove the cause, limewash the stable, and thoroughly clean the floor and surrounding yard with some strong mixture such as carbolic acid and hot water, one in twenty. If there is much irritation of the skin of the horse, wash him with warm water and soap, and apply a little weak white lotion all over, or a weak solution of carbonate of soda.

(*From the* AGRICULTURAL JOURNAL OF THE CAPE OF GOOD HOPE, *7th November* 1901.)

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## PROLIFERATING INTERSTITIAL NEURITIS OF THE SACRAL PLEXUS IN THE HORSE.

PROFESSOR THOMASSEN reports a case from Utrecht of a saddle mare eleven years old. For some six months she had been showing a want of symmetry of the croup and the left thigh, resulting from slow and progressive atrophy, which had not, however, prevented the mare from gaining prizes at trotting matches. The greater and the lesser gluteal muscles, the femoral biceps, and the gemelli were principally affected, only about an inch of muscular layer covered the great sciatic ligament. When at rest the mare leaned on the point of her toes, when walking she bent over on the pastern, and looked as if suffering from stringhalt. When trotting she jerked along on three legs. The tail, anus, and vulva were somewhat deflected to the right. On exploration the left half of the rectum was found to be relaxed and flaccid, whilst the left was normal. The bones of the pelvis were intact, without trace of fracture. Sensibility over a large surface was lessened; one might stick a pin into the left half of the croup without producing any reaction. The foot was completely impervious to the action of the most irritating agents applied to the horny membrane exposed by the removal of a portion of the sole. Professor Thomassen diagnosed a peripheric nervous lesion affecting the sacral plexus, and more particularly the nervus tibialis, and attributed it to the violent action exercised on the nerves by the efforts of running or jumping. In spite of

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the treatment adopted, which included the use of the inductive current, topical irritants and hypodermic injections of strychnine and veratrine, the lesions grew gradually worse. Before ordering the slaughter of the animals as incurable, Professor Thomassen made a deep incision in the fossa down to the sacral plexus in order to make sure that no cause existed for the compression of the nerves. He found at the base of the wound thus made a diffuse and hard inflation of all the nervous plexus. This lesion was confirmed at the post-mortem; the branches of the left sacral plexus had four times the volume of the right. The cords somewhat injured had here and there a greyish colour on the red and black part resulting from small hemorrhagic foci of old standing. Microscopic examination showed proliferating interstitial neuritis (Virchow) confined almost exclusively to the plexus itself, the sciatic nerve showing only traces of the lesion. The radicular branches of the sacral plexus were affected with the same processus of conjunctive proliferation with partial destruction of the nervous fibres as well as of the ganglionary cells.

(*Monatschrift für prakt. Heilk.*)

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## ULCEROUS STOMATITIS IN LAMBS AND KIDS.

Professor Besnoit has recently made bacteriological studies on this subject. He divides the cases into three classes—the subacute, the acute, and the extreme. The first of these is never very contagious, and is most frequently sporadic. The second is very contagious, and often causes serious loss to the farmer; it frequently ends in death by a slow process of enfeeblement and inanition, but very often there are internal complications produced by the ingestion of buccal exudates. The third class, also very contagious, develops very rapidly, and is nearly always fatal; it attacks generally lambs fifteen days after birth. At first there is intense fever, the buccal lesions develop with rapidity, and are followed by complications of gastro-enteritis, hepatitis, and pneumonia.

Diagnosis is not difficult in any case; it is sufficient to open the mouths of lambs which refuse to suck, and which constantly slaver, to find the exudates in the form of whitish blotches covering the buccal mucosa. The disease was formerly attributed simply to dirt and carelessness, but Professor Besnoit says it is due to a specific pathogenic agent. He formulates his conclusions as follows:—(*a*) the specific agent is a large micrococcus which abounds in the product of the buccal lesions, and may be found in the visceral lesions developed by auto-infection; (*b*) this microbe presents itself either singly or in chains of two or three, never as a staphylococcus; it may be cultivated in bouillon or on gelatine or gelose in very small colonies, or on potato; it is innocuous to the rabbit, but pathogenic to the guinea-pig. M. Besnoit demonstrates these conclusions by the following facts:—(1) inoculation of pure cultivations on the buccal mucosa of lambs or kids brings about the same lesions as in the natural disease: (2) the agent abounds in the matter taken from the buccal lesions, natural or experimental, in which latter they are sometimes found in a state of purity: (3) it is found in visceral lesions of animals dying by auto-infection in the course of the evolution of the natural disease.

*Treatment.*—Prophylactic: daily examination of the animals' mouths,

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isolation, disinfection. Curative: antiseptic care of the mouth, washing with chlorate of potash (4 or 5 per cent.), cauterisation of the ulcerated lesions, maintenance of the animal's strength by artificial suckling.

(*Revue Vétérinaire.*)

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## MANGE CONVEYED FROM DROMEDARY TO HORSE AND ASS.

A CASE of this kind whereby mange was conveyed from a dromedary to two horses and a female ass, living together, is reported from Hérault (France). This is supposed to be the first case of transmission from a dromedary to solipeds.

(*Ibidem.*)

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## A WOMAN'S MILK USED FOR SUCKLING A DOG.

IN a house in the neighbourhood of Paris a young bitch was born which the owner was very anxious to preserve at all costs. As the parent animal had died in giving birth to the puppy (which was in very poor condition), recourse was had to a woman's milk taken direct from the breast. The little animal greedily availed itself of this fountain of life, and the suckling went on for seventy days. On the twenty-fifth day the nurse was relieved so far by the substitution of milk soup at intervals, then by carefully skimmed meat soup, yellow and white of egg, and finally by flesh-food. The puppy weighed 170 grammes at birth, and 1482 grammes at the end of six months (from about 6 oz. to about 3 lb. 3 oz.). Thus the case of Romulus and Remus was reversed.

(*Ibidem.*)

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## DIAGNOSTIC INJECTIONS OF COCAINE.

M. DESONBRY recommends the following for lamenesses of unknown position. The solution of cocaine is made on the spot in 10 cubic centimeters of boiled water if it is necessary to operate on both sides of the limb, and in 5 cubic centimeters if only one injection is required. The dose of cocaine is as follows:—15 centimeters for ponies, 25 to 30 for middle-sized horses, 40 for big horses. The part to be operated on is first well soaped, then washed down with hot water, and finally washed with an aseptic solution. The syringe must be quite clean. If the injection is to be made along the plantar nerves the best point is the upper part of the lateral aspects of the fetlock joint, where one feels the vasculo-nervous fascia. The needle is introduced behind this cordon parallel to the skin. The injection is pushed slowly, the operator making the syringe describe a semi-circular movement, so as to spread the anæsthetic over a wide extent. This result is further obtained by compressing the injected region for a few seconds with a napkin folded like a ribbon. Five or six minutes after the injection, if the lameness has its seat in the lower part of the leg, it has completely disappeared, provided, of course, that the cocaine has been injected at the level of the nerve.

(*Recueil de Méd. Vét.*)

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## IMPORTANT PART PLAYED BY THE PNEUMO-GASTRIC NERVES IN REGULATING THE TEMPERATURE OF THE BODY.

PROFESSOR TARCHANOFF gives an account of a series of experiments performed by him on ducks, by means of which he demonstrates that it is on animals whose marrow is cut through at the level of the fourth cervical vertebra, and in which artificial respiration is maintained, that the part played by the nervi vagi is best shown. If we take two ducks which have undergone the operation almost at the same time, and if in one of them we cut the pneumo-gastrico and watch the comparative fall of temperature as taken at the rectum of the two birds, we shall see that the temperature begins to fall much more rapidly in the bird whose pneumo-gastrics have been cut. The difference of temperature has been found at a given moment to be as much as 10 degrees Centigrade (18 degrees Fahrenheit). The part played by the pneumo-gastrics is shown much less distinctly in ducks which have not been decapitated; although the differences present themselves in the same direction, the gap is not more than 2 to 3 degrees (Cent.) in favour of the bird whose nervi vagi are intact. The fall of temperature as above is explained *for the most part* by the quickening of the heart-beats and the cutaneous circulation causing a more rapid loss of heat by reason of the vascular dilatation which results from the section of the medulla. In Professor Tarchanoff's experiments these greater losses of heat do not explain *all* the rapidity of cooling in the birds. He is therefore forced to the conclusion that "the nervi vagi appear to regulate the temperature of the body by modifying not only the losses of heat by the cutaneous and pulmonary surface, but also the production of heat, thanks to their nervous networks, secretories of the different abdominal glands (stomach, pancreas, &c.).

(*Transactions of La Société de Biologie.*)

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## PARASITIC NODULES OF THE LUNGS SIMULATING GLANDERS IN A HORSE AFFECTED WITH SUMMER SORES.

M. NOCARD in presenting part of the lungs of a horse to the Société Centrale explained that it came from a horse which had died of intestinal congestion. At the post-mortem the veterinary surgeon had found the lung literally crammed with rounded nodules varying in size from a hempseed to a hazel-nut, and he suspected glanders. M. Poret was called in to give an opinion, and he had grave doubts as to the diagnosis: on the one hand it was a case of a young horse which had been subjected some months before to the mallein test and had not reacted; on the other hand the lesions presented characteristics which are not generally observed in cases of glanders. The piece of lung presented had an extremely thick fibrous shell, in the centre of which was a small mass of greyish-yellow colour, gleaming. On section, which enucleated *en bloc* very easily, leaving exposed a regularly rounded cavity with a smooth surface, the contents were firm and somewhat elastic; it gave way, however, under strong pressure of the fingers, without giving one sensation of caseous matter impregnated with calcareous. The animal had when alive been

under treatment for an old and extended summer sore, and this fact gave a cue to M. Nocard. The caseous, firm, elastic matter, gleaming when cut, was extremely like the granulations of summer-sores; was it not an extension to the lungs of the essential lesion of the summer sore? M. Nocard took the contents of some fifteen of the pulmonary nodules, and had them carefully brayed in a mortar with a few cubic centimetres of boiled water. This was injected into the peritoneum of two male guinea-pigs but produced no results, not the slightest sign of glanderous orchitis. One of them was killed, but the post-mortem showed no lesion, glanderous or otherwise. The nodules were clearly, then, not of a glanderous nature.

Other nodules, selected from amongst the smallest and most recent, were fixed in acetic sublimate, hardened in pure alcohol, enveloped in paraffin, and bisected one after the other with a Minot microtome. It was thus possible to examine, after coloration with picro-carmine or aurantia-hemateine, the whole thickness of the nodule, and bring out clearly in the heart of the amorphous caseous matter which occupies the centre of it a parasite identical with that described by Laulanié as being the provocative agent of summer sores. This is a nematode larva forming an irregular spiral, the tegument of which is transversely striated. All the nodules did not possess or did not show these; many presented in the central caseous "island" merely irregular cavities containing only formless *débris* of the initial parasite.

The nature of these lesions being thus settled, the question is, how do they arise? Laulanié admits that before fixing themselves in the derma—which, it has to be noticed, is their favourite abode—the parasites first enter the blood, into which they penetrate after the hatching of the egg which contains them, and which is ingested with liquid or solid food. This is the acknowledged pathogenesis of trichinosis, measles, and sturdy. The embryos which survive, and are carried by the chances of the circulation to suitable tissues, become encysted there. The skin has generally been considered the only organ favourable to their encystment, but M. Nocard has shown by the above examination that the pulmonary tissue is equally favourable. If the parasite circulates in the blood before fixing its abode in the skin the lungs ought to have similar nodules in all cases of horses suffering from summer-sores. This has not been noticed, but the reason may be that, as such attacks rarely result in death, surgeons have not had occasion to examine the lungs of animals so affected, or, on the other hand, have not grasped the significance of the pulmonary lesions exhibited by the animals. M. Nocard commends these reflections to his army friends who may have occasion to make post-mortems of horses which have suffered from summer sores at some period, longer or shorter, before their death. He trusts they will inform the veterinary world if they find the lungs of such animals quite free, or if, on the other hand, they find in them some vestiges of parasitic nodules developed at the same time as those of the skin. Here at least, he adds, is a fresh example of pulmonary lesions which may give rise, on superficial examination, to a suspicion of glanders.

(*Recueil Vétérinaire.*)

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## INTESTINAL CALCULI IN THE HORSE.

THE formation of calculi in the intestinal tube of the horse is fairly frequent, and is estimated at about 2 per cent of adult horses. It is serious, too, for the calculi are frequently brought from their originating point, either the cæcum or the colon, to the terminal portion of the little colon or the rectum, where they stop and sometimes cause fatal constipation. Still, cases of death arising from calculi are not so frequent as one might suppose, for these are often found in the digestive tube of horses slaughtered for butchers, although previous to that time these animals had shown no symptoms of illness. The author had occasion lately to go to the autopsy of a miller's horse, which had died suddenly without being previously ill, or ever having suffered from colic. In the colon were found a certain number of calculi, weighing altogether 46 lbs. The heaviest weighed 22 lbs., and had a perimeter of about 30 inches. Besides this enormous calculus, there were about fifteen others of varying sizes. It is curious to note that the presence of these calculi had caused no macroscopic lesions either on the mucous or on the muscular intestine. Mr. Zschokke thinks that nutritive troubles are only present when calculi are more or less stationary in one place; in that case the pressure exercised shows gangrenous phenomena of the intestinal mucosa. Nothing definite is known as to the origin of these calculi; on account of their having been so frequently met with in millers' horses, which are largely fed on bran, it has been supposed that the richness in phosphate of magnesia of this food allowed of a mixture of this salt with the ammonia contained in the intestinal tube, thus predisposing the animal to the formation of calculi. The sole origin of calculi is not there, however, for many bran-fed horses never contract calculi; and, on the other hand, these anomalies may be frequently met with in horses which are fed on a normal diet. It is more probable that the point of departure must be sought for in a modification of the gastro-intestinal secretion, or in the action of certain intestinal bacteria. After all, one begins to think that the formation of calculi in other organs such as the kidneys and the bladder may be attributed to digestive troubles, and what tends to confirm this way of looking at it is that calcareous secretions are often met with in several different organs. In fact the digestive tube should not be looked on as simply a test-tube, for in that case the formation of calculi could be caused by giving to horses a mixture of lime and magnesia as well as of ammonia.

(*Schweizer Archiv.*)

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## ON THE TREATMENT OF MILK-FEVER BY IODIDE OF POTASSIUM.

ALTHOUGH certain practitioners may have cast doubt on the efficacy of iodide of potassium in the treatment of milk fever, the author is firmly convinced of the good effects obtained by this method. He recalls the numerous modifications that have been tried in its administration, and notably the substitution for iodide of lugol solution. This substitute did not furnish encouraging results to the author. As to the injection of iodide in the udder, Mr. Hauptmann sees many inconveniences therein, notably the great difficulty of managing an aseptic injection.

Taking into consideration the effects obtained by the application to the udder of pomades made with an iodide basis, he has attempted to arrive at the same result by administering the remedy by the mouth. The advantage that Mr. Hauptmann sees in this last method is that it allows at the same time of administering agents such as caffeine and digitalis, which are capable of relieving the cardiac forces, the depression of which always constitutes such a grave complication. The fact that a certain portion of the remedy when thus administered may pass into the trachea does not constitute a serious inconvenience, provided that these agents, being dissolved perfectly, do not provoke any disturbing irritation. Finally, the author attempted the injection of an iodide solution into the uterus, and obtained the same good results without having ever observed any inconveniences. It goes without saying that the first injection must always be administered by the surgeon himself, as laymen would be afraid of passing an indiarubber probe to the required depth, and would limit themselves to a vaginal irrigation, whose results would be *nil.*

Moreover, having pointed out the effects obtained by Peter following on an injection of iodide solution in the blood-current, the author arrives at this conclusion: iodide of potassium exercises its specific action on milk-fever as soon as it reaches the blood-current, no matter in what manner it may have been introduced. Iodide should not be administered exclusively by the inter-mammary passage, seeing that the absorption of the remedy by the digestive, genital, circulatory, and lymphatic passages produces the same effect, and that the treatment by the udder does not give a quicker cure than the other methods.

(*Thierärzt. Centralblatt.*)

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## LEAD POISONING IN A COW.

M. Ebinger reports the case of a cow nine years old which, according to her owner, had licked a pot of paint and gradually lost her appetite. When examined by M. E. she was found to be very dejected, the heart-beats were very strong, the rumen inflated, appetite quite gone, milk-secretion dried up. Thinking that the animal might be poisoned with lead, M. E. administered sulphate of soda in a mucilaginous liquid. At the end of twenty-four hours the symptoms were so aggravated that the animal had to be slaughtered. These symptoms were, pushing herself against the wall, bellowing, and finally falling on the ground; all indicated extreme nervous disorder. At the post-mortem it was found tbat the contents of the stomach were blackish and gave forth a very fœtid smell; the gastro-intestinal mucosa was pale but showed no anatomical lesion visible to the naked eye. In order to verify his diagnosis, the contents of stomach and intestines were analysed. Chemical analysis revealed the presence of a strong proportion of lead salts, quite sufficient to explain the acute phenomena observed. All the visceral organs were seized, but the flesh was declared suitable for the market.

(*Schweizer Archiv.*)

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## DIAGNOSIS OF THE POSITION OF LAMENESS IN THE HORSE BY MEANS OF COCAINE INJECTIONS.

During his stay at Alfort, M. Nariski, of the Bucarest Veterinary College, made interesting experiments in this direction. He experimented on thirty-two horses suffering from various kinds of lameness; fifteen were caused by inflammation of one sort or other, four to exostoses, two to spavin, one to chronic foundering, four to contraction of the hoofs, four to chronic lesion of the hock, haunch, or shoulder. He makes the following deductions; the point chosen for the injection must be exactly the same as would be chosen for neurotomy; generally anæsthesia takes place in ten to twenty minutes according to the dose of cocaine; it lasts for at least forty minutes, and at most three hours; the lameness disappears for the same length of time and then re-appears, remaining exaggerated for several hours; when at rest the position of the anæsthetized limb changes and becomes once more normal; at the trot the lameness ceases and the gait is regular; sometimes the lameness is diminished without disappearing altogether; there sometimes arises at the point of injection a slight œdema, which lasts only two or three days; the effects are more or less marked, according as the solution is more or less concentrated. M. N. summarises his work as follows:—(*a*) Injections of cocaine have considerable value in diagnosing the seat of the lameness; (*b*) they must be made along the line of nerves; (*c*) the dose varies from ·3 to ·4 grammes dissolved in 5 to 10 grammes of water, half of which is injected on each side of the limb; (*d*) when made along the line of the anterior and posterior tibial nerves the injections produce paralysis of the limb with muscular trembling, which may last two or three hours; (*e*) solutions heated to 40° or 50° (Cent.) produce more rapid, more marked, and more prolonged anæsthesia than cold solutions; (*f*) these injections tend to discover certain frauds perpetrated in commercial transactions.

(*Monatschr. für prakt. Heilkunde.*)

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## CORROSIVE SUBLIMATE FOR STRANGLES AND ANTHRAX.

Professor Moretti reports good results in a severe case of strangles characterised by the appearance of about a hundred small abscesses on the face and in the mouth, diffuse swelling in the limbs as well as on the lower surface of the belly and breast, and by pronounced and persistent hyperthermia. Seeing the inefficacy of salicylate of soda and of various salts of quinine, administered either by the mouth or by tracheal and subcutaneous injection, Professor Moretti resolved to try corrosive sublimate intravenously. Taking the necessary antiseptic precautions he made in the left jugular a first injection of 30 grammes of a solution of 1 in 1000. On the following day the temperature had fallen from 41·5° to 38·1°. Two days later, the hyperthermia having returned, Professor Moretti administered 40, 50, and finally 60 grammes of the same solution daily. In a few days the fever finally disappeared, the local injuries improved, and the horse became quite convalescent.

*Anthrax.*—Veterinary-Surgeon Baruzzi found two cows of the same herd showing symptoms of anthrax—high temperature (41·8°), staring coat,

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muscular tremblings, and liquid blood-stained evacuations. Having no hope of preserving the first patient, Baruzzi proposed to the owner trying intravenous injections of corrosive sublimate. Three injections were made on the same day betwen eight A.M. and eleven P.M. A few hours after the second the temperature had fallen from 41·8° to 40°, the tremblings had ceased, and the evacuations were normal. On the following morning the animal was quite cured. The second animal, having presented the same symptoms, was treated in the same way with equal success. The doses are not given, but probably they were the same as in foot-and-mouth disease. For this Professor Lanzillotti recommends not more than 10 centigrammes for small-sized animals and 15 for big ones; he says it is better to give repeated doses of small quantity than one strong dose.

(Professor DEGIVE in the *Annales de Méd. Vét.*)

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## FRACTURE OF THE POSTERIOR CANON-BONE IN A HORSE. —CURE OF INJURY.

IN the month of April I was summoned in haste to attend a horse which had developed intense lameness in consequence of an accident in the stable. The owner stated that he had found the animal lying on his right side with his near hind leg caught in his tether, and making violent efforts to rise. When the animal had been set upon his legs the owner noticed immediately that he could not put any weight on his off hind leg, and it was at once observed that there was a fracture of the canon.

A simple examination enabled me to confirm the diagnosis. The horse, which gave indications of acute suffering, presented, about 5 centimetres above the off hind fetlock-joint, a pretty serious swelling of the parts. In addition the foot, which had previously been curved, had become splayed, which indicated that the lower end had pivoted on the upper. By fixing with one hand the upper part of the canon I could easily with the other bring inwards the lower extremity of the limb, to the extent of forming a right angle with the upper part; on the other hand, it is not possible to obtain the least deviation outwards. In the course of this handling I perceived very distinct crepitation. Minute exploration of the bony ends permitted me to make the following diagnosis:—Complete simple fracture of the principal metatarsal, transverse outwardly and slanting in its internal half. The cause was probably either the fall or the violent efforts made by the animal to free its limb and rise up. I informed the owner of the serious nature of the accident, and told him that recovery was very uncertain, but I was requested to do my best for the animal. I therefore got the animal fixed to a shoeing-frame which was at hand, the fractured limb being fixed by the upper extremity of the canon to the transverse bar of the frame. With a view to obtaining an easy reduction of the fracture, I applied a cord to the pastern in such a way that the two ends should be crossed at the posterior part, and then passed through a ring fixed to the floor of the frame. Whilst my assistant kept pulling at this cord I easily restored the two bony ends to their normal connections. After suitably levelling up the region of the canon, the fetlock, and pastern by means of a layer of peat-moss soaked with mashed plaster, and kept in place by strips of cotton, I applied three splints. To form

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these I had to take strips of very stiff leather half a centimetre thick, which I dipped into water to render them more tractable. These splints, which adapted themselves perfectly to the region, were kept in place by folds of cloth soaked in plaster, the bandage extending from the pastern to the upper extremity of the canon. The horse was then brought back to his stable and placed in slings. The results were quite successful. On the sixth day the horse began to support himself on the fractured limb; on the tenth day he did this quite easily. The improvement went on daily, but the horse was not allowed to walk till the end of the fifth week. I could then see no trace of lameness, and therefore removed the bandage, and after applying a blister to the fractured region, I sent the animal out to grass. In a fortnight he was quite restored to strength, and is now doing heavy draw work.

The points to which I wish to draw attention are—(*a*) the rapidity with which certain complete fractures of horses' legs are cured; (*b*) the ease with which fractures can be reduced, as shown above; (*c*) the efficacy of leather splints.

(M. NAVEZ in the *Annales de Méd. Vét.*)

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## PERSISTENT HYPERSECRETION OF SWEAT IN THE SKIN OF THE FLANK FOLLOWING ON A WOUND IN THE HAUNCH.

A FOUR-YEAR-OLD HORSE struck its right haunch against the corner of a shed and fractured it. The animal was taken to hospital on three legs, and there it was seen that considerable extravasation of blood had taken place in the region of the flank. This was gradually reabsorbed, and the attitude of the animal became normal, but the antero-superior iliac spine was depressed; the croup was shorter to the right; there persisted in the crural region an indurated œdema. A short time afterwards attention was drawn to a humid patch on the flank, looking as if the animal had licked it. This patch proved permanent and unchangeable, and was evidently the result of profuse transpiration produced by functional exaggeration in the sudorific glands of the region. The part played by the nervous system in the lesions which produced this trouble is shown by the complete insensibility of the region. It was possible to stick pins into the skin of the humid part without producing the slightest reaction. There was thus a solution of continuity in the sensory network which serves the skin of this part, and it was doubtless the reparatory callus of the fracture which had compressed the nerve to such a point that it no longer permitted transmission of sensibility. The secretion of sweat is dependent on the ganglionary system. We know for a fact that the removal of the upper cervical ganglion increases the secretion of the lachrymal gland and brings about profuse perspiration and hyperthermia over half of the head and neck; we know also that the same phenomena accompany the cutting of the cervical branch of the great sympathetic. It is by the vaso-motor action of this network that the secretory troubles are to be explained. In the present case we see a similar fact establish the truth that the cerebro-spinal system plays also an important regulative part in the sudorific function.

(*Recueil Vétérinaire*).

## EXPERIMENTAL DIAGNOSIS OF GLANDERS BY INOCULATION INTO THE PERITONEUM OF THE GUINEA-PIG.

When the intra-peritoneal injection of a suspected product brings about vaginality in the male guinea-pig, it is not sufficient to observe the fact with the naked eye in order to have grounds for declaring the existence of glanders. We must proceed to the bacteriological study of the lesion in order to prove that it comes from the bacillus of glanders. Various microbes have been declared capable of producing vaginalities when injected into the peritoneum of the guinea-pig. M. Nocard amongst others has shown that certain forms of lymphangitis of the limbs, which closely resemble glanders, are due to a microbe capable of producing testicular troubles analogous to those brought about by the virus of glanders, if it is inoculated into the peritoneum of the guinea-pig. M. Mollereau has reported a case of ulcerous lymphangitis simulating glanderous farcy and giving orchitis to the guinea-pig. But this is not all. Rabe and, after Sim, Kutscher have found in the discharge from glanderous horses a bacillus differing from that of glanders, and capable of producing in the male guinea-pig a kind of orchitis resembling glanderous orchitis. Side by side with the bacillus of glanders the discharge from horses suffering from that disease may contain in greater or less abundance other microbes. M. Galtier once found in it a round microbe, which after being injected into the peritoneum of the male guinea-pig became very prolific—so much so as to cover over and almost choke off the glanders-bacilli. In this case inoculation on the forehead of a dog is an excellent means of diagnosis. On the scarified skin of that animal, which then shows itself a surer reaction than the guinea-pig, the bacillus of glanders purifies itself to some extent and produces the characteristic glanders lesion, the produce of which produces pure glanders in the guinea-pig.

(*Journal de Méd. Vét. de Lyon.*)

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## TREATMENT OF TETANUS BY SUBCUTANEOUS INJECTIONS OF FRESH NERVOUS SUBSTANCE.

Professor Schindelka states that he has been treating in this way a horse and an ass. He got a quantity of rabbit brain and at once triturated the cerebral substance in a strong proportion of sterilised water. This emulsion was then injected under the skin. The result was absolutely negative; at most one could only observe that the symptomatic manifestations proceeded more slowly. Professor Schindelka then tried sheep's brain, which he treated in the same fashion. The treatment was applied to eight horses suffering from tetanus, and seven of these recovered; one died on the fourth day. Professor Schindelka intends to continue his experiments, and as soon as he has tried them on a sufficiently large number of animals will communicate his results.

(*Thierärzt. Centralblatt.*)

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# Review.

THE TRANSPORT OF HORSES BY SEA. By E. E. MARTIN, Veterinary-Lieutenant, Army Veterinary Department. Published by THACKER, SPINK, & Co., Calcutta.

This little book of forty-nine pages has been published by the author in the belief that it supplies a want. It is, we believe, the only book so far published exclusively dealing with the transport of horses by sea, and so we welcome it. It contains chapters on the selection of transports, the fitting of them, the management of horses prior to embarkation and on board ship, the diseases of horses on board, the management of them after arrival at their destination.

The author seems to have done his work fairly well, but we venture to differ with him in one or two of his statements and to wish in others (for the guidance of the young veterinary surgeon who may be asked to see to the fitting out of a ship) that he had laid down the rules more stringently. As an example the author says, in his chapter on ventilation, that "these shafts should be fairly numerous, but it is difficult to lay down a hard and fast rule about their number." Speaking of the use of the alleyways (those portions of the between decks that lie on either side of the engines) the author gives us the idea that they are quite suitable for carrying horses when the ship is in motion. One ship which went out to the Cape lost every horse which was placed in the alleyways, and in our opinion it is the worst part of the ship. If it *has* to be utilised the engines must be cased and deafened.

Notwithstanding these little criticisms the book has its good points, and with much that it says we are in agreement.

The methods adopted by the shippers of horses from Australia to India, which are methods with which the author is acquainted, are somewhat different from those prevailing in the shipment of horses from here or America to the Cape, but we are glad to have the book to see the lines they go upon.

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# Notes and News.

### THE SANITARY INSTITUTE.

The Nineteenth Congress and Exhibition of the Sanitary Institute will be held in the city of Manchester, commencing September 9th, 1902, under the presidentship of the Right Hon. the Earl of Egerton of Tatton.

The work of the Congress is devoted to the advancement of sanitary knowledge, which is closely related to the progress of important centres of population, and the various meetings afford an opportunity for the representatives of sanitary authorities to discuss the many problems arising in municipal and public health administration. The exhibition held in connection with the congress enables them also to see recent sanitary appliances collected together, and to note those approved by a committee of experts.

### THE OUTLOOK OF THE VETERINARY PROFESSION IN AMERICA.

The outlook for the veterinary profession never was so bright as at the present time. The field for the veterinarian is constantly increasing. The rapidly growing population of the United States itself calls for a correspond-

ing increase in the raising of food animals. The same conditions call for an increased number of horses, which animal, I am glad to say, is here to stay; it is a case of the "survival of the fittest." Several times "horsedom" has had a scare; when railroads were first introduced, it was thought that the horse would be a thing of the past, but they only caused a general increase in trade, and a greater demand for horses to cart produce of all kinds to the depots.

The general introduction of electric cars in the cities was first looked on as a setback to the horse, but this was found also to be an error. It only presaged an increasing population, and a corresponding demand for the horse.

Then came the bicycle; this, for a time being, did greatly decrease the demand for light drivers and saddle horses; but it proved to be only a "nightmare" in the form of a fad, and after a few years, like all fads, played itself out.

Now, last of all, and still before us, is the automobile fad; for I am sure it is only a fad, and will soon have its run and be over. This can be illustrated by a joke. A prominent automobilist, upon being asked how much it cost to run his machine, replied, about a cent a mile to run it and $10 a mile for repairs. This reply is proven by inquiry among automobilists, and by noting the immense bargains offered in the machines by people who have grown tired of them.

I am personally acquainted with a number of people who have given them up and gone back to the old standby, the horse.

Yes, he is here to stay.

Again, a vast and growing field for the veterinarian of high quality is in the Government service as inspectors in abattoirs, stock-yards, ports of entry, experiment stations, &c. Indeed, in this specialty the demand exceeds the supply.

As an item of interest and proof of the immense amount of animals inspected for the year 1900, I might mention that the total number of cattle inspected ante-mortem was 53,087,994.

That the horse-raising industry is greatly on the increase is evinced by the high prices at the present time, being as high or higher than at any time of the past; also, our horse export trade is growing very rapidly, as shown by an increase for 1900 of 40 per cent. over 1899, the United States having exported 56,315 horses during 1900.

This greatly increasing demand at home and abroad for live stock and dairy products, means an increased value of such animals, an increased number of such animals, and, what is more for us, a necessity for an increased number of veterinarians.—(*From an Address by Dr Quitman at the opening of the Chicago Veterinary College, Winter Session.*)

## Obituary.

### THE LATE COLONEL HALLEN.

THE death occurred at his residence, near Stratford-on-Avon, on Wednesday, August 20th, from heart disease, of Veterinary Lieutenant-Colonel Hallen. The deceased was the son of Veterinary-Surgeon Herbert Hallen, 6th (Inniskilling) Dragoons, and was educated at Bridgnorth and Leeds Grammar Schools, and at the Royal Dick Veterinary College and Edin-

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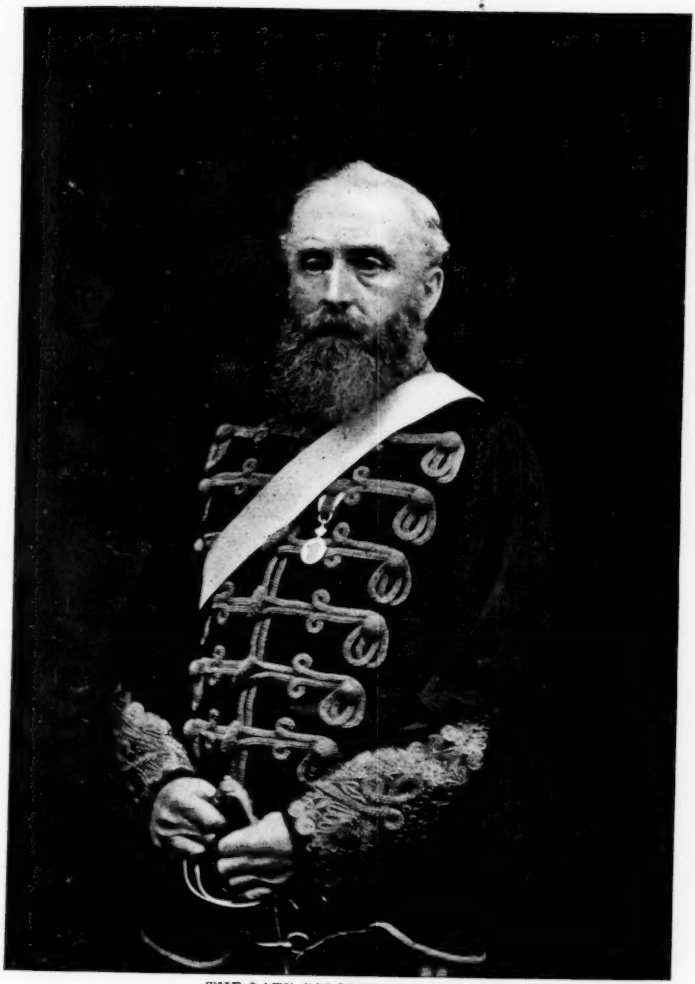

THE LATE COLONEL HALLEN.

burgh University. He entered Bombay Veterinary Department in 1850, and had a distinguished career, serving as principal veterinary surgeon in the Abyssinian expedition, 1867-8, for which he was awarded the medal, mentioned in despatches, and recommended for special consideration of Government, and holding the highest positions in his profession in India. When on furlough in 1886 he was elected Principal of his old College in Edinburgh. In 1892 he became Veterinary Lieutenant-Colonel, and retired two years later. Colonel Hallen was created C.I.E. in 1893.

SERVICES.

Served with the 1st Bombay Lancers from 1850 to 1855 in Rajpootana.

Employed on Remount purchasing duties in Bombay, 1857-58.

Served with the Bombay Horse Artillery from 1858 to 1862. Proposed and conducted a Regimental Veterinary School at the Headquarters of the Bombay Artillery during that time at Poona.

Appointed Principal Veterinary Surgeon of the Bombay Army 14th July 1862; organised the Veterinary Department of the Army, and established the Army Veterinary School at Poona. Services acknowledged in Bombay Government Resolution No. 171 M., dated 9th May 1863.

Nominated as Superintendent of the Stud Department of the Bombay Presidency by the Secretary of State for India in Despatch No. 148, dated 24th November 1863.

Served throughout the Abyssinian campaign in 1867-1868 as Principal Veterinay Surgeon of the Force, and, with ten veterinary surgeons, had veterinary charge of upwards of 50,000 animals of cavalry, artillery, and transport corps of the Force. Mentioned in Despatch No. 6, dated 1st June 1868, of Lieutenant-General Sir Robert Napier, G.C.B., G.C.S.I., to the Secretary of State for India; Medal recommended in 1868 by the Right Honourable Lord Napier of Magdala, G.C.B., G.C.S.I., in recognition of his services in the Abyssinian campaign, for special consideration of Her Majesty's Government.

Recommended in 1868 by Right Hon. Lord Napier of Magdala, G.C.B., G.C.S.I., Commander-in-Chief of Bombay Army, for Good Service Pension.

Appointed Officiating Inspecting Veterinary Surgeon of the Bombay Army in 1868.

Services urgently required by the Government of India in October 1869 for special service as President of the Indian Cattle Plague Commission, on which duty he continued until July 1872. Received the thanks of the Government of India.

Appointed Inspecting Veterinary Surgeon, Bombay Army, Mar. 15, 1871.

Appointed Acting Inspecting Veterinary Surgeon, Bengal Army, July 1872; and, at the same time, requested by the Government of India to undertake, in addition to his military inspecting veterinary duties, the organisation of a Veterinary College in Calcutta, under the Department of Agriculture, Revenue, and Commerce, and was appointed Principal of the proposed College. When performing the latter duties, his services were called for by his Excellency the Viceroy in Council on the Special Stud Commission, convened 16th December 1872, and he continued on this special duty until 31st March 1876. Received the cordial thanks of the Government of India for his valuable services on the Commission.

Appointed 31st March 1876, by his Excellency the Governor-General in Council, General Superintendent of Horse-Breeding Operations.

## CONTAGIOUS DISEASES ANIMALS ACTS, 1864 AND 1890.

SUMMARY OF RETURNS OF OUTBREAKS in ENGLAND and SCOTLAND for the Eight Weeks ending 11th January 1902.

ENGLAND AND WALES.

| Swine Fever. | Anthrax. | Glanders (including Farcy). | Sheep-Scab (for months of November and December). |
|---|---|---|---|
| Outbreaks 234<br>Slaughtered 1392 | Outbreaks 77<br>Attacked 141 | Outbreaks 166<br>Attacked 356 | Outbreaks 321 |

SCOTLAND.

| | | | |
|---|---|---|---|
| Outbreaks 1<br>Slaughtered 5 | Outbreaks 57<br>Attacked 74 | Outbreaks 2<br>Attacked 7 | Outbreaks 29 |

SUMMARY OF RETURNS OF OUTBREAKS in IRELAND for Six Weeks ending 28th December 1901.

| Swine Fever. | Glanders (including Farcy). | Sheep-Scab (for month of November). |
|---|---|---|
| Outbreaks 12<br>Slaughtered 189 | Outbreaks 1<br>Attacked 2 | Outbreaks 50 |

## Communications, Books, Journals, &c., Received.

Agricultural Journal (Cape of Good Hope); Berliner Thierärztliche Wochenschrift; La Clinica Veterinaria (Milan); Deutsche Thierärztliche Wochenschrift; Tannoform in Veterinary Medicine (March); The Sanitary Journal; Scottish Medical and Surgical Journal; Veterinary Record; La Riforma Veterinaria; Le Mois Scientifique (Paris); L'Echo Vétérinaire (Liège); Annales de Médecine Vétérinaire (Brussels); Johns Hopkins Hospital Reports; Journal of Comparative Medicine and Veterinary Archives; Recueil de Médecine Vétérinaire; Gazette Médicale de Paris; Modern Medicine; Johns Hopkins Hospital Bulletin; Il Veterinario di Campagna (Moncalieri); Le Bulletin Vétérinaire (Orleans); Revista de Medicina Veterinaria (Bucarist); La Revista Veterinaria (Buenos Aires); Zeitschrift für Fleisch-und Milchhygiene (Berlin).

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